FEE 6 '50D

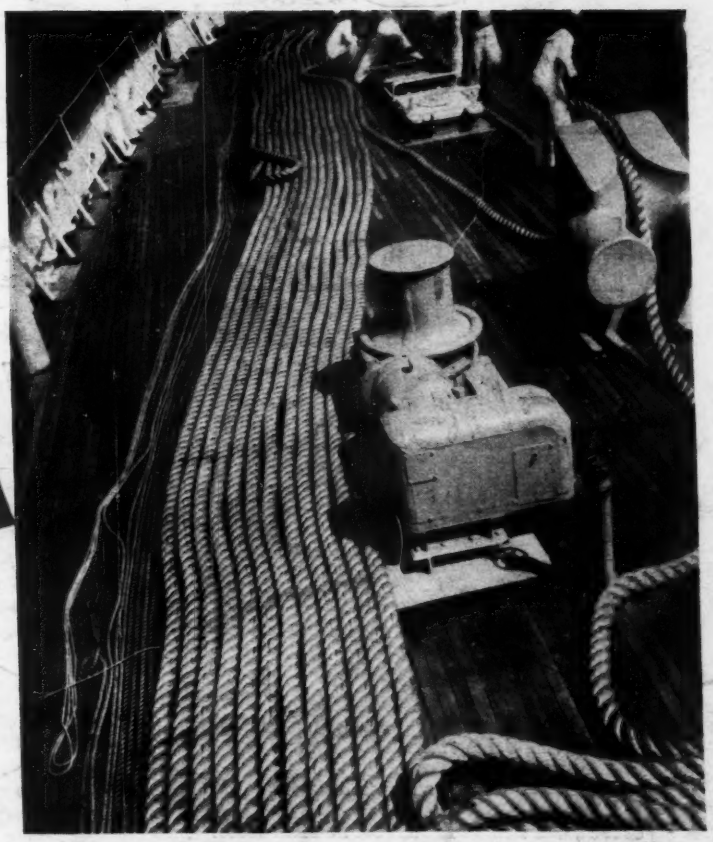
ATLANTIC FISHERMAN

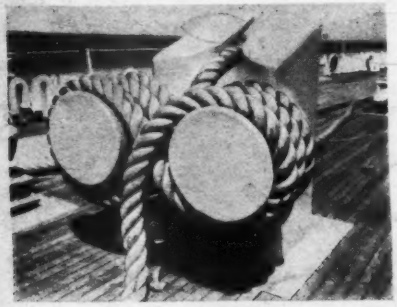
JANUARY 1950

EASIER to Handle

Columbian ROPE

More Flexible!





There is no Finer Rope

No other rope gives you the same superior qualities — consistently, uniformly, dependably.

It's pliable when wet. It's flexible even after many tows.
It's rot-proofed and water-proofed. It's balanced and non-kinking.
It resists abrasion and wear. It lasts longer.

No wonder men who know, choose Columbian every time . . . for every kind of marine use.

Quality-controlled from plantation to you

From the finest fibre-growing plantations in the Philippines, Columbian's own buyers select only the most suitable grades of fibre. It's thoroughly inspected, graded . . . sent to Columbian's plant in Auburn. And here skilled workmen turn the fibre into as fine a rope as you can buy.

Every foot of Columbian Tape-Marked Pure Manila Rope is guaranteed for quality, strength, durability and service.

COLUMBIAN ROPE COMPANY

310-80 Genesee St., Auburn, "The Cordage City," New York

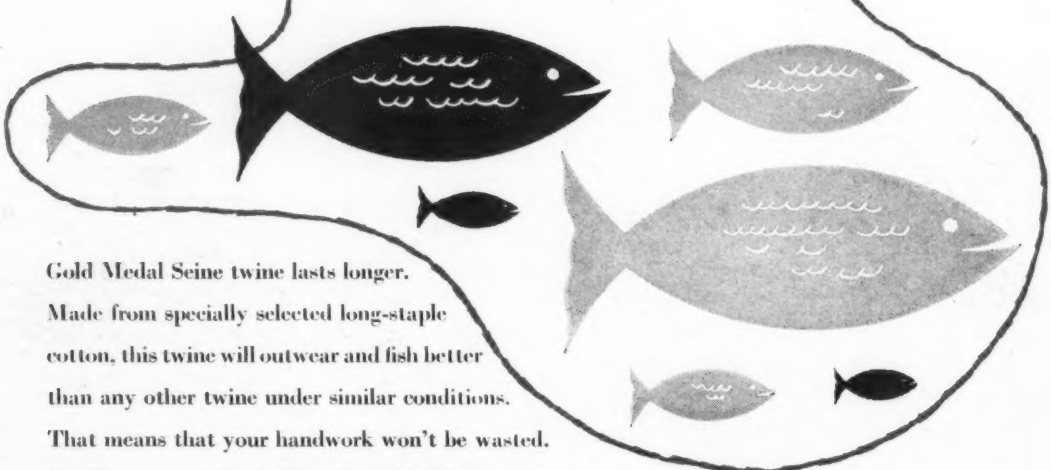
Red White Blue

Columbian

PURE MANILA ROPE

Boston Office and Warehouse 38 Commercial Wharf

this is the twine that lasts longer... *fishes better!*



Gold Medal Seine twine lasts longer. Made from specially selected long-staple cotton, this twine will outwear and fish better than any other twine under similar conditions. That means that your handwork won't be wasted. You'll get a net that will catch and hold your fish. Gold Medal Seine Twine is exactly the same twine used to make Gold Medal Netting—famous for quality and dependability for 108 years.

Gold Medal

QUALITY SEINE TWINE

THE LINEN THREAD CO., INC.

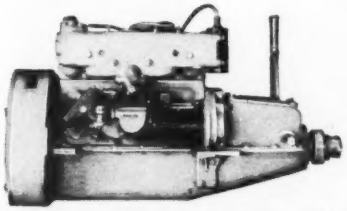
(Successor to American Net and Twine Company)

418 Grand Street, Paterson 1, N. J.

Chicago 10, Ill. • New York 17, N. Y. • Boston 10, Mass. • Baltimore 3, Md. • Philadelphia 6, Pa. • San Francisco 5, Cal. • Gloucester, Mass.

at New Reduced Prices! Lathrop MARINE ENGINES

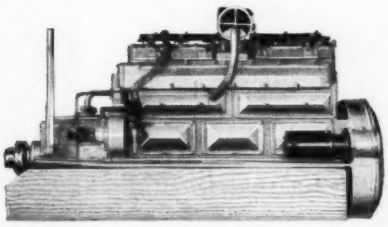
LIGHT WEIGHT LOW COST



Model	Hp.	R.P.M.	Cyl.	Displ.	Weight
LH-4	45	3200	4	133	440
LH-6	64	2200	6	282	876
LH-Atom	90	3000	6	282	876
LH-Deluxe	120	3000	6	320	916
LH-Super	132	3200	6	339	936

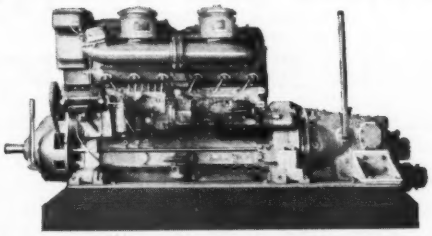
All five models also available with reduction gears.

FINEST QUALITY MEDIUM SPEED



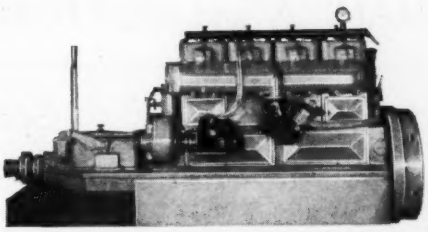
Model	Hp.	R.P.M.	Cyl.	Displ.	Weight
Mystic 100	95	1575	6	525	1700
Mystic 125	130	1800	6	585	1700
Mystic 150	150	1435	6	927	2510
Mystic 175	175	1535	6	1013	2510

ECONOMICAL DIESEL POWER



Model	Hp.	R.P.M.	Cyl.	Displ.	Weight
D-50	50	800	4	665.23	3000
D-60	60	900	4	665.23	3000
D-80	80	800	6	997.84	4200
D-90	90	900	6	997.84	4200
DH-200	187	1600	6	935.00	5100

HEAVY DUTY WORK ENGINES



Models	Hp.	R.P.M.	Cyl.	Displ.	Weight
Engineers' 60	60	875	4	665	2100
Engineers' 75	75	915	4	792	2290
Engineers' 115	118	1000	6	1188	2950
*Standard	21	27	700	3	412	1400
Standard	30	30	660	3	463	1450
Standard	28	28	550	4	550	1700
Standard	40	45	710	4	618	1750

**not pictured above.*

Send us the specifications of your boat and we will be glad to furnish, at no obligation, full details on the Lathrop engine that is right for it. We invite your inquiries as to prices, extra equipment and service details.

check new reduced prices!

THE Lathrop ENGINE CO.
MYSTIC, CONNECTICUT
SINCE 1897 MANUFACTURERS OF RELIABLE MARINE ENGINES

Get Your FISHING GEAR *from* F. J. O'HARA

A section of F. J. O'Hara Trawling Company's Boston warehouse, where there's always an ample stock of fishing gear readily available.

Complete Outfitters for Trawlers and Draggers

MANILA and COTTON TRAWL NETS for EVERY SIZE BOAT

Special Redfish Cod-ends

Made of heavy manila, small mesh twine. Available in all lengths.

MANILA and SISAL CORDAGE WIRE ROPE

Mending Twine — Metal Floats — Shackles

Ask About O'HARA CHROMED HIDES

Stocks Carried at Boston, and Portland and Rockland, Me.

Please contact us for further information

F. J. O'HARA TRAWLING CO.

211 Northern Ave., Boston 10, Mass.

Adequate Fisheries Research Should Precede Regulation

Experiments with new types of fishing gear during the past year have suggested several possibilities for tapping new fishery resources. For example, floating trawls, developed for midwater fishing, may make accessible some hitherto untouched supplies of fish.

Scientific exploration of ocean bottoms may uncover new fishing grounds. There still is much to learn about what goes on in the sea, and it could be that periodic shortages of fish on certain grounds are due to migration to other areas.

In this connection, the work of the Institute of Fisheries Research of North Carolina is of interest. Its current shrimp program is attempting to find answers to the questions: Where do shrimp go when they leave the fishing grounds in the Fall? Can they be caught in the deeper waters offshore? Is the bottom trawlable beyond the known grounds? Are there other fishery products offshore that might furnish work for the shrimp fleet out of season? Should a closed season be imposed upon the fishery and, if so, where and when?

Findings of the survey thus far already have changed the original conception of the shrimp fishery in this State. It was found that the shrimp season was closed when it should have been open and vice versa. A good deal of previously unknown trawlable bottom has been opened by the survey.

Dr. Harden F. Taylor summarized the findings which have resulted from the Survey of the Marine Fisheries of North Carolina, of which he is the Executive Director.

Basing his conclusions on his experience of 35 years as a fisheries scientist and industrialist, Dr. Taylor outlined his conception of the functions of a Fisheries Institute. In his opinion, an Institute of this nature should devote itself to promotive and creative activities rather than repressive activities. In developing this theme, he pointed out that for the past several decades the underlying philosophy of most fisheries research work has taught that exploitation of the fisheries by commercial practices must lead to the extermination of fish, and that to prevent this, protective measures must be invoked.

While acknowledging that one should not go to extremes in ruthless and uncontrolled exploitation, he said one should also recognize the improbability of a species being exterminated. He spoke of the small stock of fish necessary to establish and support an extensive population, citing in particular the striped bass fishery on the West coast. In the late 70's or early 80's the U. S. Fish Commission distributed in the streams of California some three hundred and fifty striped bass from the East coast. These fish formed the basic population for what is now an extensive fishery on the West coast, even larger perhaps than that on the East coast.

Dr. Taylor discussed the enormous potential productivity of the sea, and contrasted this potential with land potentials, citing the great advantage which man has taken of the land possibilities, and the little use he has actually made of the ocean. Characterizing agriculture as going forward by leaps and bounds, he gave as some of the reasons the following: scientific research, irrigation, crop rotation and mechanization. He contrasted this picture with that of the fishing industry, saying that the fishing industry of itself has shown few improvements, except perhaps the shift from sail to power, and the development of the otter trawl.

A portion of this backwardness on the part of the fishing industry, Dr. Taylor felt, is due to what he characterized as "imposed inefficiency by regulation". Recognizing that regulation in some instances is necessary to the well-being of any natural resource, and that uncontrolled exploitation may lead to the detriment of the people, Dr. Taylor charged the Institute with the responsibility of carefully searching to determine such dangers and admonished the people as a whole to avoid regulations without sound foundations.

Questions regarding legislative control can be answered only by learning the facts regarding the life history and ecological relationships of all our commercial shrimps. The philosophy of Huxley, a pioneering scientist in fisheries research, demanded that no regulation of any sort should be made without sound and sufficient scientific foundation.

ATLANTIC FISHERMAN

REGISTERED U. S. PATENT OFFICE

The Magazine for Fish and Shellfish Producers On Atlantic Coast, Gulf of Mexico, Great Lakes

VOL. XXX JANUARY 1950 NO. 12

TABLE OF CONTENTS

SPECIAL FEATURES

Variations in Long Island Sound Oyster Set..... 15
New Fishery Law Suits Reviewed..... 16
"Wisconsin" Proves a Fast Trawler..... 17
Lake Erie Is Productive Fishing Area..... 18
New and Improved Products for Fishing Boats Exhibited at National Motor Boat Show..... 23

NEWS REPORTS

Alabama 20
Cape Cod 32
Connecticut 42
Florida 21
Georgia 20
Gloucester 34
Louisiana 20
Maine 19
Maryland 35
Massachusetts 33
Michigan 22
Mississippi 20
New Bedford 32
New Brunswick ... 49
New Jersey 46
New York 39
North Carolina ... 46
Ohio 22
South Carolina 44
Texas 45
Virginia 43
Wisconsin 22

REGULAR DEPARTMENTS

Sounding-Lead 8
Vineyard Bailings 48
Equipment and Supply Trade News..... 36
Fish Landings for Month of December..... 40

Where-to-Buy Directory 50
Index to Advertisers..... 51
Classified Advertising 52

Published Monthly by Atlantic Fisherman, Inc.
Goffstown, New Hampshire

25 cents a copy, $3.00 a year

CCA Member: Controlled Circulation Audit and National Business Publications, Inc. NBP

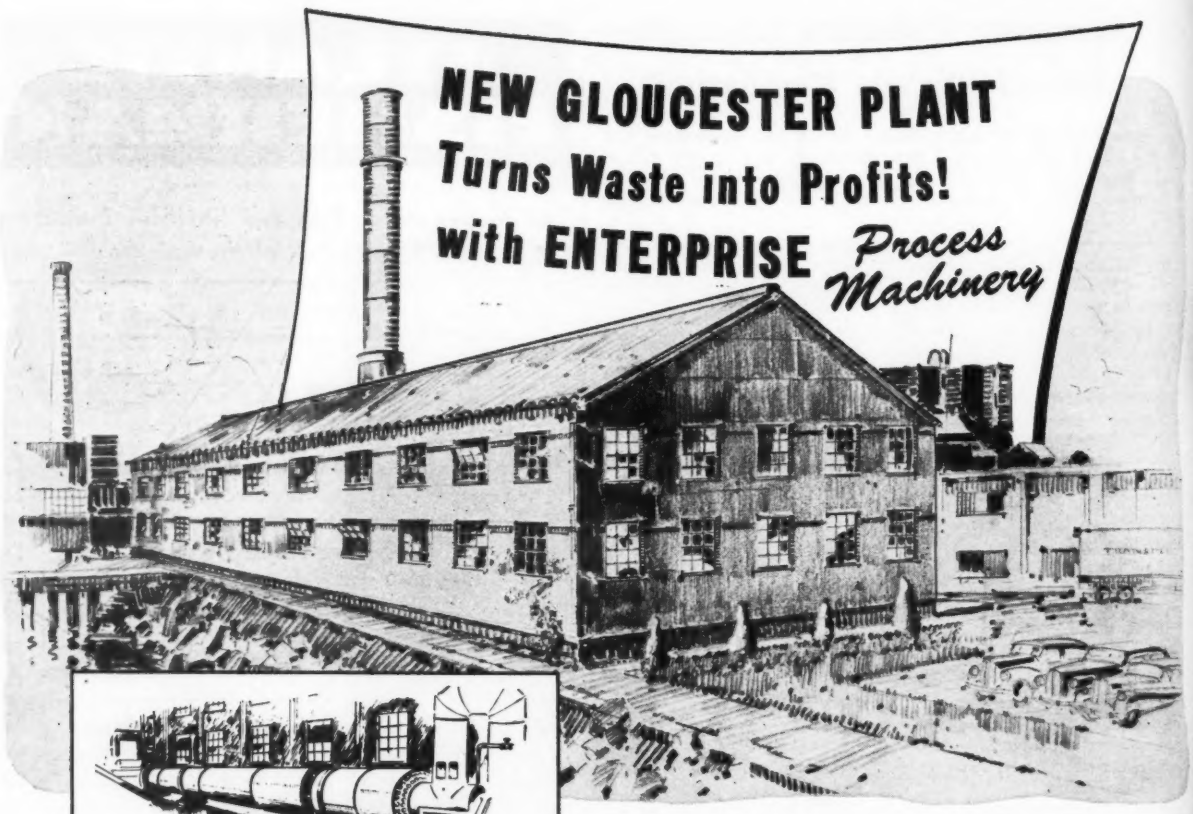
P. G. LAMSON, *President* — GARDNER LAMSON, *Publisher and Editor* — A. E. BROWN, *Managing Editor*

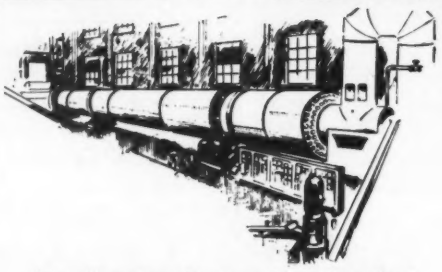
Advertising Representatives:

Kennedy Associates, 60 East 42nd Street, New York 17, N. Y.

Nourse Associates, 412 West 6th Street, Los Angeles 14, Calif.

NEW GLOUCESTER PLANT
Turns Waste into Profits!
with ENTERPRISE *Process Machinery*



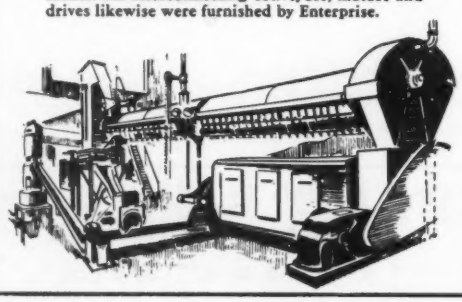


These illustrations show some of the major units of Enterprise Process Machinery in the new Gloucester By-Products Plant:

ABOVE: 72" diameter 60' Continuous Rotary (STD) Steam Tube Dryer and Enterprise Vertical Mill.

BELOW: CD-30 Direct Steam Cooker, PF-24 Continuous Screw Press and EVM-35 Vertical Mill for grinding wet press cake.

Other Enterprise equipment includes a PF-7 Foots Press, bucket elevator, dry meal blower and cyclone sacker. All interconnecting conveyors, motors and drives likewise were furnished by Enterprise.



The opening of the Gloucester By-Products Company plant marks an important stage in the rapid progress of this aggressive fishing port . . . and the story of its waste conversion methods sets an example for the whole industry. From the initial storage of the raw material through cooking, pressing, fluffing, drying and grinding into finished products, the whole job is done with Enterprise Process Machinery, engineered by experts to meet the specific requirements of the Gloucester plant.

Over 63 years of research and design experience go into every unit of Enterprise equipment. In addition to a wide range of standard sizes and models, Enterprise will engineer special units or a complete plant to meet your most exacting needs.

ENTERPRISE *Process Machinery*

PROCESS MACHINERY DIVISION OF ENTERPRISE ENGINE & FOUNDRY COMPANY
18TH AND FLORIDA STS., SAN FRANCISCO 10, CALIF. • *Offices in Principal Cities*

Chrysler

AMERICA'S No. 1 MARINE ENGINE

Proudly Announces *Greater Power Range*

87 hp. ACE

104 hp. CROWN

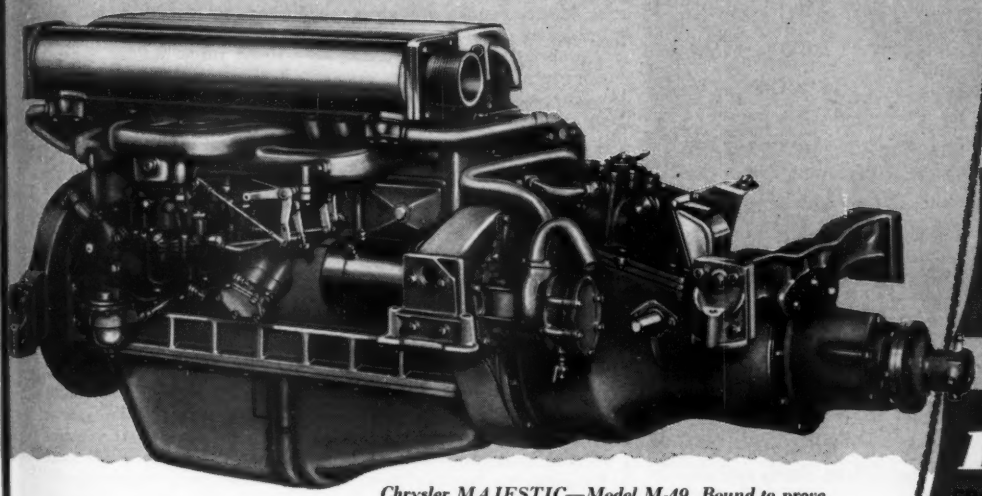
135 hp. ROYAL

160 hp. MAJESTIC

105 hp. ACE SPECIAL

125 hp. CROWN SPECIAL

165 hp. ROYAL SPECIAL



Chrysler MAJESTIC—Model M-49. Bound to prove popular both with pleasure and work boat owners. Bore and stroke 4" x 5". 377 cu. in. 160 H.P. at 3000 r.p.m.

For 1950, choose your marine engine from the largest and finest line ever offered under the Chrysler name.

Every one of the seven models is completely Chrysler-designed, Chrysler-engineered and Chrysler-built solely for marine use. Chrysler does not convert, rebore or rebuild marine engines.

A host of new improvements in addition to the Chrysler low cost Hydraulic Control are featured. Prices are quoted on complete engine units. No extra charge for Storage Battery, Full Flow Oil Filter, Oil Cooler, Thermostatic Control, Rubber Mountings or Opposite Rotation Engines.

If you are planning to power or repower this year, you'll find by every comparison *your best buy is Chrysler!*

Chrysler

MARINE ENGINES

Mail this coupon for details!

MARINE ENGINE DIVISION, CHRYSLER CORPORATION
12200 EAST JEFFERSON AVENUE, DETROIT, MICHIGAN

Send me descriptive folder on your 1950 line.

Name_____

Street_____

City_____ State_____

Type of Boat Owned_____

JM

DEPENDABLE

POWER

TRANSMISSION

WITH . . .

FG REVERSE
EC 8000
REDUCTION
GEAR

FOR . . .

- FISHING BOATS
- TUG BOATS
- TOW BOATS
- WORK BOATS

RUGGED CONSTRUCTION of this heavy duty reverse and reduction gear assures maximum power transmission under heaviest load conditions. It's designed for service. . . . It's the workhorse of the fleet!

SEE . . .

"The CAPITOL"

DISPLAY

BOOTH
427

NEW YORK
MOTOR BOAT
SHOW

Features You'll Like!

- COMPACT . . . easy to install or work on
- Positive lubrication with independent oiling system
- WET CLUTCH SYSTEM for fast, easy control
- FRICTION FREE roller and ball bearings throughout

Write for Complete Specifications!

AUTO ENGINE WORKS, Inc.

333 A. North Hamline Ave., St. Paul, Minn.

Builders of Marine equipment over 44 years.

Choose the engine with the Capitol gear on it!

Sounding-Lead

F&WS BUDGET ESTIMATES—The budget estimates for the fiscal year 1951, running from July 1, 1950, to June 30, 1951, as approved by the Budget Bureau and recommended by the President, allow the Fish & Wildlife Service $1,412,217 for "exploration, development, and utilization of fishery resources." This embraces all activities shown in previous years under appropriations for commercial fisheries, Fishery Market News Service, as well as for exploratory fishing and technological phases of the Pacific Oceanic Fishery Investigations.

The budget recommendation would provide an increase of $338,817 over last year's base appropriation, which would be used to expand the Fish & Wildlife Service's commercial fishery statistics, economic investigations, exploratory fishing and gear improvement in the Gulf of Mexico, Fishery Market News Service, and Pacific Oceanic Fisheries Investigations.

The increases, if granted by Congress, would materially broaden the Fish & Wildlife Service program, but will not yet provide all that is desired by the industry. Regarding statistics, the increase would permit resumption of fishery surveys in the South Atlantic States, Great Lakes, and Mississippi River area. The increase requested for economic investigation would allow studies of factors which affect the price of fishery products, as well as the development of information on the competitive effect of agricultural price support programs, imports, and other pertinent factors bearing on fish prices and fish consumption.

An increase in funds for exploratory fishing in the Gulf of Mexico would provide an additional six to seven months' operation of the exploratory vessel in the Gulf. The current appropriation is sufficient for only about three months' operation during the year.

The additional operating time will be devoted especially to the location of commercially valuable offshore populations of fish. The total estimates will be sufficient to permit some research in the development of new and improved types of fishing gear and vessel equipment for handling that gear. Also, some research in the adaptability of electronic devices to fishing operations can be conducted.

NORTH ATLANTIC TREATY—Legislation implementing the Northwest Atlantic fisheries conservation treaty signed last February by 10 nations was introduced in Congress January 6 by Sen. Theodore F. Green of Rhode Island.

The bill provides for the appointment of three U. S. representatives on the International Commission which will execute the conservation objectives of the treaty. Under the terms of the legislation, the commissioners, to be named by the President to serve without compensation, will represent the Fish & Wildlife Service, the States on the North Atlantic coast, and the public.

In turn, the three commissioners would name an advisory committee for the United States to be made up of from 5 to 20 members. This committee would "insure that the interests of labor, vessel owners, management and the general public were taken into account."

Enforcement of International conservation measures on the high seas would fall to the Coast Guard, so far as the United States is concerned. In addition, the Department of Interior would have enforcing authority, and the several States adjoining the North Atlantic coast would not be prevented from continuing their normal conservation practices.

RADIO BUOYS FOR MARKING FISHING GEAR, GROUNDS—An invention which recently has been patented in Scotland enables fishing gear and grounds to be marked and located by radio aid. The device consists of a radio buoy containing an electric battery, a small transmitting set, and a short aerial similar to those used on automobiles. When the buoy is set to mark a position, it gives off call signals which can be picked up on a vessel's direction finder. To eliminate one vessel picking

up another vessel's buoy, each buoy is given a certain call signal. The result is that vessels can go straight to their own buoys no matter what the weather.

This invention is reported suitable for many types of fishing operations. The buoys can be used by trawlers in foggy weather to assure that the vessel continues to drag on a particular ground or in a desired position. The trawlers can set two buoys and fish between them using the call signals to keep them in the same position even in the thickest fog.

SHAD INVESTIGATION— A tentative program for the investigation of the shad fishery under the additional appropriation recently granted by Congress was presented by the Fish & Wildlife Service's Middle and South Atlantic Fishery Investigations and was approved by the Atlantic States Marine Fisheries Commission on December 9, substantially as presented, with the suggestion that it include a complete compilation of all published or unpublished material dealing with shad.

Major features of this program include determination of the size of the stock at various stages of life; measurement of the effect of natural conditions, fishing intensity or other man-made conditions on the stocks; measurement of mortality rates; and surveys of streams where shad populations are not now well known, particularly in the Southern States. Proposals for restoration of badly depleted runs include design of fishways for dams, recommendations for pollution abatement, and recommendations for management of the fisheries.

The first season's work will be concentrated principally in the Hudson River, but with some activity on Chesapeake Bay and in New England.

BOAT TAX BILL— The office of the Chief Counsel for the Fish & Wildlife Service in the Department of Interior is preparing the language for a proposed bill in Congress which would wipe out the inequities of the current tax on fishing vessels. About two months ago, the groundwork for making the change was laid with various trade organizations sitting down with representatives of the Government and talking over the best means to undo the legal snarl which has caused boat owners, particularly in New England, to pay excessive taxes into the unemployment fund of the Federal Social Security Program.

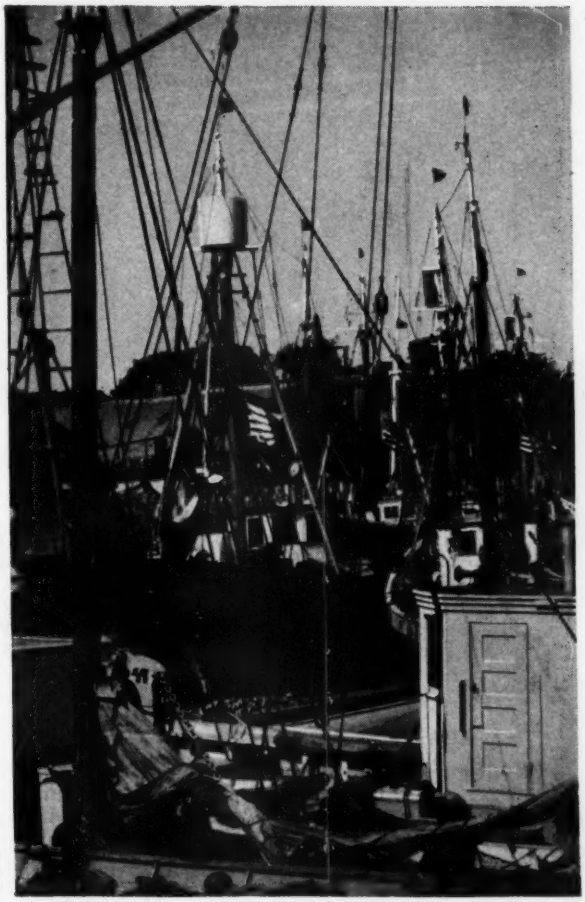
The proposed bill would peg the boat tax to a maximum of 3% as the general law calls for.

QUAHOG FARMING— Tentative plans have been made by the Fish & Wildlife Service to establish experimental commercial quahog (hard clam) farms in representative areas. Although laws of most States prohibit clam farming, it is believed that when satisfactory farming methods have been developed and commercial practicability has been demonstrated, the laws may be revised to legalize farming. Studies on the food of hard clams to be conducted at the Beaufort, North Carolina Laboratory will apply also to this work and may help to tell in advance whether areas are suitable for quahog farming.

SHELLFISH SURVEY— The Atlantic States Marine Fisheries Commission has been given a grant of $10,000 by the U. S. Public Health Service to determine the extent of losses of shellfish producing areas to production because of sanitary conditions. The survey will be made by technologists of the Fish & Wildlife Service.

CANNED SHRIMP EXPORTS— According to the Office of International Trade, Department of Commerce, United States exports of canned shrimp during the first 9 months of 1949 were almost 900,000 lbs. larger than shipments during the corresponding period of 1948, but were 286,000 lbs. less than the exports of the first 9 months of 1947. Aside from exports of more than 1,000,000 lbs. to the United Kingdom in 1947 and of more than 800,000 lbs. to Canada in 1949, canned shrimp sales to foreign customers have been small compared to the sales of canned sardines and canned salmon.

BETTER SERVICE AT LESS COST...
THAT'S WHY
Today it's Roebling!



YOU GET WHAT YOU WANT when you rig with Roebling Wire Rope... performance you can depend on... service that lasts longer and cuts down your costs!

Steel used in Roebling Wire Rope for Rigging and Trawler Lines is made in Roebling's own steel mill for utmost strength, toughness and long life under all conditions of sea and weather. Every step in drawing the wire and stranding is performed with painstaking care and by the most modern, precision machines. Roebling is the most famous name today wherever wire rope is at work, ashore and afloat.

There's a type and size of Roebling Wire Rope to meet your every requirement. Call on your Roebling Field Man to help you choose the right ropes for best service at least cost. John A. Roebling's Sons Company, Trenton 2, N. J.

ROEBLING

A CENTURY OF CONFIDENCE

CHECK! Feature by feature, here's your best marine performance buy!

✓ **Built-in finger-tip gear control:** The touch of a finger, at any time, brings a smooth, silent, quick and positive, shift to reverse—*100% reverse.* You enjoy new convenience, cut installation costs, eliminate the need for booster equipment.

✓ **Extra smoothness:** Packard puts the flywheel aft, where it belongs, to cut "crankshaft whip" to the vanishing point. For still greater smoothness and quietness, Packard equips the Marine Eight with hydraulic valve tappets and a nine-main-bearing crankshaft.

✓ **100% high pressure lubrication:** Full high pressure distributes oil to every moving part of the engine—even piston pin bearings.

✓ **Amazing gasoline economy:** Packard gives you balanced carburetion and advanced design manifolding for easier starting, responsive performance, and more running time for each gallon of gasoline.

✓ **Conservatively-rated power:** Packard Marine Engines deliver full advertised horsepower. *You get horsepower you can count—and count on!*

✓ **And prices?** That's the most pleasant surprise of all!

See your nearest Packard Marine Engine dealer for complete details and specifications on the Packard line—or write direct to Packard Marine Engine Department (Dept. A), Packard Motor Car Company, Detroit 32, Michigan.

"POWERED BY PACKARD"

Here are some of the boat builders who offer Packard Marine Engines as optional equipment in their newest models:

Baltzer • Chris-Craft • Colonial • Correct Craft • Equitable • Everett Hunter • Hacker • Hubert Johnson • Hugh Lee • Hydra Cruiser • Matthews • Owens • Richardson • Roamer • Steelcraft • Wheeler

PACKARD

MARINE ENGINE DEPARTMENT, Detroit 32, Mich.

Ask the man who owns one

WICKWIRE ROPE

A PRODUCT OF CF&I

Ask any user...you'll find them everywhere

In scores of industries, users of Wickwire Rope have developed an affectionate respect for its performance, safety and long life. And, for true economy, they use Wickwire's WISSCOLAY® Preformed. It lasts longer—is easier to cut, splice and install. It's kink-resistant and safer to handle. Wickwire Distributors and Rope Engineers, in key cities everywhere, are prepared to render prompt service in meeting your wire rope needs. Wickwire Rope Sales Office and Plant—Palmer, Mass.

IN THE EAST—Wickwire Spencer Steel Div. of C. F. &I.
500 Fifth Ave., New York 18, N. Y.
IN THE ROCKIES—The Colorado Fuel and Iron Corp.
Continental Oil Bldg., Denver, Colo.
ON THE WEST COAST—The California Wire Cloth Corp.
1080—19th Ave., Oakland 6, Cal.

Better start doing this to part of your money

YOU KNOW how money is!

Today it's in your hand, and the next day it *isn't!*

A lot of people, however, have found an excellent way to make certain they will have money when they need it most.

They *salt* away part of their pay each week in U. S. Savings Bonds through the Payroll Savings Plan where they work.

They know that saving this way assures them of the money for a down payment on a new home . . . a new car . . . or retirement when the time comes.

Furthermore, in ten years they get back $4 for every $3 invested in U. S. Savings Bonds.

Why don't *YOU* start saving money *regularly* and *automatically* where you work, or at your bank through the Bond-A-Month Plan?

Automatic saving is <u>sure</u> saving— U.S. Savings Bonds

Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.

"Best engines we ever had!"

say W. Allen and Roswell P. Flower about their "Cat" Diesel Marine Engines

When talk swings to engines, the Flowers of Frank M. Flower & Sons, Bayville, N. Y., agree emphatically about the "Cat" units powering their oyster boats.

Let W. Allen Flower have the floor first about the D318 recently installed in the *Ida May*, a 50′ x 16′ x 3′6″ craft with a 30″ x 20″ wheel: "There isn't any doubt it's the best engine we ever had. She answers the controls a lot better than any other. I can get a third more oysters on the same ground since I've had the 'Caterpillar' Diesel in my boat. With a gas engine I used to fuel up every three days. Now it's every two weeks."

Now let's hear what Roswell P. Flower has to say about the D13000 that powers the *Twin Harbors*, a 79-footer with a 22′ beam, 5′ draft and 38″ x 36″ wheel: "The D13000 is the best engine we ever had. In the five years we've had her, she hasn't needed an overhaul. We don't use any oil. She is very economical."

That's high praise, but you'll find every "Caterpillar" Diesel Marine Engine is engineered to live up to it. No matter what the horsepower of the unit you choose, you can be sure it's *all there*. Your nearby "Caterpillar" dealer, available 'round the clock for service, will be glad to give you further evidence about the superior performance of these dependable engines.

CATERPILLAR TRACTOR CO., PEORIA, ILLINOIS

LOOK UNDER THE HIDE

Lubricating oils break down at high operating temperatures, forming carbons, lacquers and gums—enemies of long engine life. To prevent lube oil breakdown, "Caterpillar" Engines are equipped with oil coolers. Pistons are oil sprayed to remove heat. Controlled oil temperature preserves lubricating qualities, reduces maintenance costs, adds to owner profits. Look under the hide for quality.

CATERPILLAR DIESEL

REG. U. S. PAT. OFF.

Marine Engines

CATERPILLAR TRACTOR CO.
Box AF-1, Peoria, Illinois

Send me, without obligation, booklet, "Your Fellow Skippers."

*Name*_____

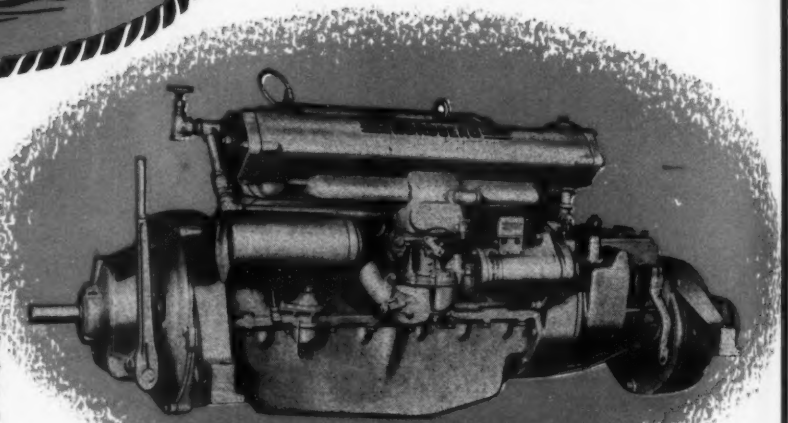
*Address*_____

Here's the best mooring spot in *New York!*

"BERTH K"
MOTOR BOAT SHOW
GRAND CENTRAL PALACE

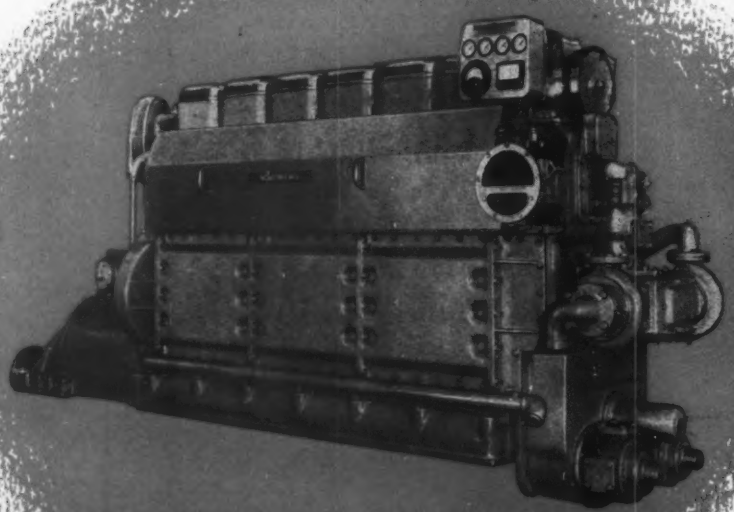
. . . from Jan. 6th to 14th

. . . where you can see the well-known NORDBERG *Marine Engines!*



see THE NORDBERG GASOLINE MARINE ENGINES . . . Three 6 cylinder models, all designed and built from stem to stern as full marine engines—with 7 main bearings, water jet cooled exhaust valve seats, sealed, safe and separate gear drives for generator, distributor and water pump . . . and many other features. Available with sturdy front power take-off as shown, also with auxiliary pulley drive on right side. Furnished for direct drive or with Nordberg designed and built reverse and reduction gears, in ratios of 4.12, 3.32, 2.44 and 1.88 to 1. Power range, 52 to 135 H.P.—all with STA-NU-TRAL clutches. SEND FOR BULLETIN 143B.

see ONE OF THE NORDBERG 4-CYCLE MARINE DIESEL ENGINES . . . for fishing vessels, tugs, towboats, work boats and larger yachts, available in 9" x 11½", 13" x 16½" and 16" x 22" sizes, ranging from 220 to 1750 H.P., supercharged and non-supercharged, for direct or reduction gear drive. These rugged, compact Diesels pack plenty of dependable, low-cost power for the toughest marine service . . . backed by over 50 years of specialized engine building experience. SEND FOR BULLETIN 154.



NORDBERG—world-famous manufacturers of outstanding marine engines, invites the boating fraternity to inspect the Nordberg Gasoline and Diesel Marine Engines to be displayed at the 1950 Motor Boat Show. Here is an opportunity to see for yourself why more and more owners and operators are switching to Nordberg power for main propulsion and auxiliary service. If you will be unable to attend the Boat Show, write for bulletins listed above.

NORDBERG MFG. CO.
MILWAUKEE 7, WIS.

A DIVISION OF NORDBERG

NORDBERG

NORDBERG MILWAUKEE

DIESEL and GASOLINE ENGINES

Variations in Long Island Sound Oyster Set

Irregularity May Be Due to Lack of Proper Food for Larvae*

A GOOD set of oysters in northern waters, including those of Connecticut, is not a rule but an exception. For example, of the past twelve seasons only four gave commercially important sets. Lightness and irregularity of setting are the chief handicaps of the oyster cultivators of Long Island Sound because the latter can never be assured that a new generation of oysters will be available to repopulate the beds.

At present, the causes responsible for variations in the intensity of oyster setting in Long Island Sound are not fully determined and understood. Nevertheless, during the last twelve years, 1937-1948, enough new data have been collected which may help clarify some aspects of this important and interesting question.

Lack of Spawners

We know that any species, in order to reproduce, should have a sufficient number of individuals to act as parents. Were our oyster beds depleted to such an extent that not enough spawners were present, lack of set could be ascribed to that cause. However, this probably has never occurred in our waters because there are always several million bushels of adult oysters in and near the area of the setting beds guaranteeing enough spawners. We cannot, therefore, consider the lack of spawners a cause responsible for the lack of set.

In some areas the failure of oysters to spawn could be advanced as a reason for the failure of setting. As a matter of fact, in some earlier articles discussing spawning of oysters, opinions were expressed that in the deeper water of Long Island Sound oysters spawned only once in ten years. Our observations showed, however, that this is not so. We found that oysters develop gonads and spawn every year. While the thickness of the gonads may vary from year to year, nevertheless, each year enough spawn is accumulated at the beginning of the spawning season.

The failure of some aquatic species to propagate has been explained by the reason that a large number of the eggs discharged remained unfertilized and later perished. This explanation cannot be applied to our oysters because, in their case, usually a large number of individuals spawn simultaneously, and this mass spawning insures fertilization of the majority of the eggs. On several occasions we observed spawning of oysters on the shallow bed of Milford Harbor. During the spawning, the water over the bed was rendered milky with the discharged eggs and spermatozoa. Examination of the eggs showed that all were fertilized, thus indicating that there was no appreciable waste of eggs. A similar situation probably exists in the deep water beds.

On the basis of the presented considerations we may conclude that in Long Island Sound a sufficient number of oyster larvae is produced each year. These larvae are planktotrophic with a long free-swimming or pelagic life which, in our waters, is about 18 days. Larvae of this type are "cheap" because the eggs from which they develop are small, containing little yolk and, therefore, they can be produced in extremely large numbers.

However, the initial advantage possessed by the oysters in producing a large number of eggs and larvae is counterbalanced by several disadvantages. The first of these is, perhaps, the long larval period. During this period the larvae are exposed to the attacks of their enemies and are entirely dependent in their development upon the presence in the water of certain plankton forms which serve them as food. Furthermore, during this period the larvae also are exposed to continuous changes in their environment, some of which may cause heavy mortality.

Effect of Temperature

The first factor that always comes to mind when considering oyster larvae survival is temperature. It cannot be denied that low temperature prolongs the larval period, thus exposing the larvae for several more days to their enemies and other unfavorable conditions. However, we do not think that fluctuations in temperature in Long Island Sound during any particular Summer or, as recorded during different Summers, may kill the larvae.

Recent observations at Milford Laboratory showed that if larvae kept at a steady temperature of about 22.0°C. were placed directly in cold water of about 8.0°C., and after being kept there for 30 minutes were again transferred back to 22.0°C., they would survive this treatment, even if it was repeated several times at two-day intervals.

Although temperature may affect the larvae by prolonging their swimming period or by affecting the quantity or quality of their food supply, no clear-cut relation was found between the departure of temperature from the mean during the periods between July 1 and September 30 and intensity of setting. The heaviest set of twelve years, which occurred in 1940, was during the year when the temperature departure was considerably below average.

The changes in salinity in Long Island Sound are so small that they certainly cannot be regarded as responsible for the mortality of the oysters. Roughly, our salinity range is between 25.0 and 28.0 parts per thousand. Usually the changes in salinity of the water for the same period of the year seldom exceed 2.0 parts per thousand, and not in a single case did we find that the salinity for the corresponding week in twelve years exceeded 3.0 p.p.t. However, although these changes are not great enough to cause mass mortality of larvae they may, nevertheless, reflect on the production of the food on which larvae exist.

The per cent of sunshine during the breeding period of oysters also should be considered as one of the factors which may have an important influence on the survival of larvae. This, of course, does not mean that intensity of light itself may kill or stimulate the growth of larvae. Its effect is largely confined to the growth of plankton forms which may serve as food for oyster larvae.

Since, at present, none of the above discussed causes appears to be dominant in causing mass mortality of larvae, one, naturally, turns to look in another direction for an explanation why larvae disappear in our waters. We shall discuss two of the possible reasons, the first being extermination of larvae by their enemies, and the second, death of larvae because of lack of food.

Presence of Enemies

There is no doubt that a high percentage of larvae is eaten by their enemies, and that, in some cases, the presence of a large number of enemies may be the primary cause of failure of oysters to set. It is doubtful, however, that the failure of set in Long Island Sound is primarily due to that cause. Were we to assume that oyster larvae disappear because they are eaten, we would naturally expect to notice a similar disappearance of the larvae of closely related species of mollusks, such as clams, mussels, teredos, etc., which live in the same environment with oysters and have the same enemies. Our observations show that this is not the case.

In the Southern States the fouling of shells with various organisms presents a definite problem because these organisms deprive the larvae of setting space. Most of these organisms are also larvae eaters. Furthermore, in addition to the bottom forms there are large numbers of jellyfish and other pelagic larvae-eating organisms. Yet, regardless of such a large variety and the large numbers of larval enemies heavy oyster sets occur quite regularly.

In Long Island Sound, on the other hand, the bottom fouling forms are fewer in species and numbers than, for example, in Chesapeake Bay or in the Carolinas. Although a few of our shells, planted in early July, may be found silted by the end of the season, very few of them would be encrusted with barnacles, ascidians, etc., as is almost always the case in Southern waters. Obviously, the larvae enemies in our waters are not as numerous as in some other areas where good sets are, nevertheless, produced regularly. Thus, even if the larval period in our waters is longer than in the South, it still is improbable that the failure of our sets would be due almost exclusively to the activities of the larval enemies.

Absence of Proper Food

The final cause which we wish to consider in this article is that of lack of proper food for the oyster larvae. At first, the

(Continued on page 47)

* Excerpts from a paper by Dr. Victor L. Loosanoff, director of the Fish & Wildlife Service Laboratory at Milford, Conn.

New Fishery Law Suits Reviewed

By Leo T. Parker, Attorney at Law

LEGAL controversies often are unavoidable, while on the other hand, litigation may be unnecessary if both parties become familiar with court decisions rendered in previous similar cases. Therefore, we are offering a brief review of the causes and consequences of a few important cases recently decided by the higher courts.

According to a recent higher court decision a State law which makes it unlawful to dynamite fish not only is applicable to public waters but also to private pools and ponds.

For illustration, in State v. Taylor, 214 S.W. (2d) 34, a State law was litigated which provides: "It shall be unlawful for any person to place any explosive substance in any of the waters of this State, whereby any fish which may inhabit said waters may be killed, injured or destroyed."

The higher court held that this law is applicable to all oceans, lakes, rivers and also private small pools which are not connected with public waters. The court said: "We hold that our statutes apply to private waters."

Zoning Ordinance Held Valid

Modern higher courts consistently hold that an ambiguous city ordinance will be given the benefit of doubt in order to hold it valid. This is so because the courts are adverse to holding zoning ordinances void.

For example, in City of Newburyport v. Thurlow, 84 N.E. (2d) 450, the testimony showed facts, as follows: The city council passed an ordinance which divided a city into districts, and established boundaries of the area to be used exclusively for residences. However, only one map was in existence at the time the ordinance was passed and it was kept by the city clerk.

It so happened that one Thurlow intended to engage in operating a clam shucking plant, a clam business, and a tin shipping container business in this area. Suit was filed to enjoin Thurlow from conducting this business.

Thurlow argued that the ordinance was void because the ordinance did not specifically refer to any particular map. Nevertheless, the higher court held the ordinance valid, saying: "It is plain that the zoning map in the custody of the city clerk is the map referred to in the zoning ordinance and is a part of that ordinance. A decree is to be entered enjoining the defendants (Thurlow) from using the premises for a clam shucking plant, a clam business and a tin shipping container business."

Purchaser Breaches Contract

Modern higher courts consistently hold that when a purchaser of fish breaches a purchase contract the seller may sue and recover damages equal to his financial loss resulting from the purchaser's breach.

For example, in D'Acquisto v. Evola, 202 Pac. (2d) 596, the testimony showed facts, as follows: The Del Monte Fish Products sued the Tom's Wholesale Fish Dealers for damages. The testimony showed that the latter have been in the business of selling sardines in the San Francisco Bay area. The former, for many years, have been in the business of buying and selling fish, including sardines, at wholesale.

One day Del Monte telephoned Tom's and asked whether the firm wanted sardines at 6c a pound. Del Monte told Tom's that the sardines were "large" sardines of the same "quality" as the last order. The testimony showed that Tom's then instructed Del Monte to buy an entire boatload at 6c a pound, and to see that no one else got them.

Pursuant to these instructions, Del Monte purchased the entire load for 6c a pound and had the fish unloaded. Soon afterward a representative of Tom's arrived and immediately upon observing the fish, told Del Monte that they were small, mushy and mixed. At that time the fish had been unloaded for two and one-half hours. The evidence is that sardines deteriorate very rapidly unless iced, and, of course, when unloaded, the fish that were at the bottom of the hold were on top of the pile.

Del Monte asked the court to order Tom's to pay damages equal to the amount the former paid for the sardines. The testimony showed that the fish that Tom's refused to accept were sold by Del Monte at 2c a pound. Hence the latter lost 4c a pound on the fish purchased at 6c a pound.

The higher court ordered Tom's to pay to Del Monte $2,496.25, the difference between 2c and 6c a pound for the fish purchased by Del Monte on telephone order by Tom's.

The court said "There is an abundance of evidence that the fish were solid and firm, although defendants (Tom's) testified that they were soft and mushy. The evidence shows that, except as to size, the fish were of the same quality as those involved in the earlier transaction. Even if the fish had softened up by 11:30 a.m. there is evidence that defendants ordered the fish unloaded and dumped on the floor, and that they remained there for at least two and one-half hours. There is also evidence that this would tend to cause the fish to deteriorate . . . This being so, plaintiffs (Del Monte) did not breach their contract of agency, nor were they guilty of negligence in carrying out their contract by buying the fish for defendants."

Remedies of Purchaser

Recently a higher court held that if a seller breaches a sale contract the purchaser may rescind the contract and recover the purchase price; or he may sue and recover the difference between the actual value of the merchandise at the time of the sale and what it would have been worth if it had been as represented by the seller. Also, in special instances the purchaser may recover additional damages.

However, the purchaser cannot keep the subject of the sale and also recover the full purchase price from the seller, although the purchaser spent his own money in trying to place the merchandise in good condition. See Powers v. Rosenbloom, 62 Atl. (2d) 531.

Here it was shown that a purchaser paid a seller one hundred dollars ($100.00) for a used refrigerator supposed to be in good working condition. Later the purchaser sued the seller for damages and alleged that the refrigerator was entirely useless and of no value. During the trial, testimony was given which proved that the purchaser had tendered the refrigerator back to the seller and demanded repayment of the purchase price which was refused. Then he removed the working parts of the refrigerator, sold them for junk, replaced them with new parts at an expense of over one hundred dollars, and thereafterward refused to redeliver the refrigerator to the seller.

The purchaser asked the court to order the seller to pay him $100.00 and at the same time permit him to retain in his possession the refrigerator "because it was worthless and of no value whatsoever" when delivered by the seller.

The higher court awarded $100.00 damages to the purchaser, but ordered him to return the refrigerator to the seller. This court said: "Recovery of the purchaser is not of what was paid, but it is the difference between the actual value of the article purchased and what it would have been worth had it answered to the warranty." Thus the purchaser got back his $100.00 but lost the money expended for repairing the refrigerator.

Law of Partnership

According to a recent higher court decision, the relationship between partners is one of mutual trust and confidence, and the law imposes upon them the highest standard of integrity and good faith in their dealings with each other. In other words, one partner is not permitted by law to secretly invest his money in an enterprise associated with the business in which the partnership is engaged. On the other hand, a partner may invest his personal money in an associated enterprise if other partners have knowledge of the investment and do not object.

For illustration, in Lipinski v. Lipinski, 35 N.W. (2d) 708, it was shown that a partnership was engaged in commercial fishing. One partner purchased certain real estate needed by the partnership. The higher court held that since this partner did not practice fraud or deceit upon his associates, it was permissible for him to purchase land in his own behalf, even though such land may be used in the fishing operations, provided he does so in good faith and without taking advantage of the other partners.

The court said: "He merely bought it. Any of the other partners could have done the same. He violated no confidence; he had no advantage, as the others were not intending to buy it."

"Wisconsin" Proves A Fast Trawler

120 Ft. Vessel Lands First Fare at Boston

THE new 120′ steel trawler *Wisconsin*, latest addition to the Boston fleet, landed her maiden trip of 92,500 lbs. on December 20. She was designed and built by Sturgeon Bay Shipbuilding & Dry Dock Co., Sturgeon Bay, Wis., and is owned by Roen Transportation Co., Sturgeon Bay, of which Capt. John Roen is president.

Capt. John V. Stimberis, formerly of the trawler *Michigan*, is skipper of the new craft, while Pat Roche is chief engineer, and Lawrence O'Neill, cook. Ben M. Larson is port captain for the Company.

The *Wisconsin* is a sister ship of the *Michigan*, having similar hull lines but being 6′ longer. Capt. Rudolph Greene is now in command of the *Michigan*, which is owned by Charlevoix Transit Co., whose officials include Capt. Roen and William J. Wolter.

Dimensions of the new trawler show a waterline length at maximum draft of 112′, length between perpendiculars of 108′4½″, beam of 23′3″, maximum draft of 12′ and depth of 12′9″. The vessel is well arranged, and has every convenience for the comfort of the crew and efficiency of operation. She is registered at Wilmington, Del.

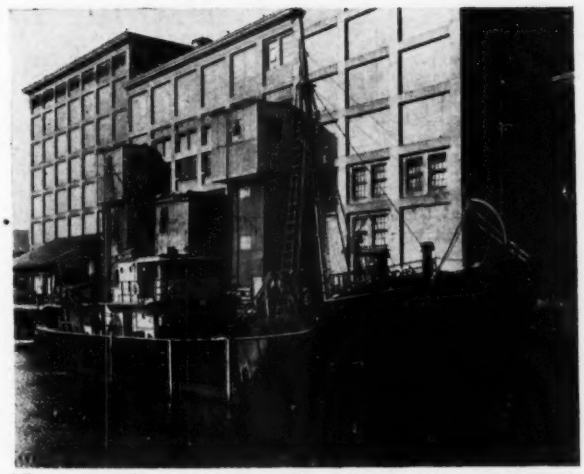
Left to right, Capt. John V. Stimberis, engineer Pat Roche and port captain Ben M. Larson of the "Wisconsin".

On her delivery trip to Boston, the *Wisconsin* made 14½ knots, indicating she is a fast boat that will be able to go and come from the grounds in good time. She is powered by a 900 hp., 12 cylinder General Motors Diesel, one of the largest engines in the fishing fleet.

Commodious quarters are provided on the new vessel, there being 12 bunks in the fo'c's'le, 3 staterooms below aft each with 2 bunks and sink, and the Captain's quarters aft of the pilot house. There are a shower and toilet in the upper engine room, while under the whaleback adjacent to the fo'c's'le companionway are 2 sinks, 2 toilets and a shower. The Captain has a private toilet and lavatory off the stateroom.

A unique feature in the pilot house is the cabinet that houses the Submarine Signal No. 1215 recorder-type Fathometer and No. 712Z indicator-type Fathometer and navigating light switch box. Placed on the stateroom bulkhead, the cabinet has sliding glass doors which protect the instruments from sea spray that may come through the windows. The switch box is fitted with a Henschel running light indicator which sounds a buzzer and flashes a light if trouble develops in the electrical system.

The pilot house has sound-proof paneling on the ceiling, and provides good all-around visibility. Edson steering gear is used, the equipment consisting of a Model 4-A pedestal, worm geared unit, with 7:1 ratio and 14″ diameter drum grooved for ⅞″ wire rope. Among the navigating instruments are RCA 75 watt, Model ET8012D radiotelephone, loran and Standard Arrow Bludworth direction finder.



The new 120′ steel trawler "Wisconsin" at Boston Fish Pier. She was built by Sturgeon Bay Shipbuilding & Drydock Co., Sturgeon Bay, Wisc.

The galley in the main deck house is modernly equipped and contains a cabinet type sink and a double refrigerator with two walk-in doors. The York refrigerator compressor is located in the upper engine room.

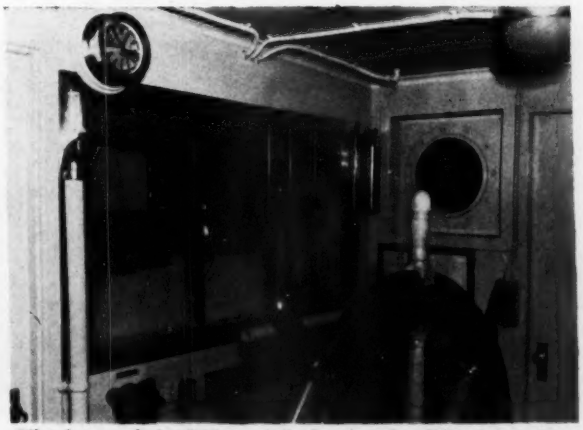
All fishing gear on the trawler was furnished and made up by Westerbeke Fishing Gear Co., and includes Grimsby nets, Wickwire trawl cable, Wall and Plymouth rope, Wesco cod-end protectors and trawl doors. Socony-Vacuum oils are used aboard the vessel.

The *Wisconsin* is equipped with a Model 1000 electric Bromfield trawl winch with capacity of 1400 fm. of ⅞″ wire rope. Winch power is furnished by a 165 hp. Diesel connected to an 80 kw. generator which supplies current for a 100 hp. winch motor. The winch operator has a protected operating station in the forward part of the deck house. Bromfield also supplied the 7½ hp. fish hoist and the deck gear.

The main engine has a Falk Air-Flex 2.48:1 reduction gear unit, and there are Neoprene rubber expansion joints on the salt water system that cools the heat exchanger. Main engine fresh water cooler and lube oil cooler as well as reduction gear lube oil cooler are of Ross manufacture. There is a 20 kw. tail shaft generator on the main engine.

A 2 cylinder, 15 kw. General Motors Diesel auxiliary generating unit is used for ship's lighting, and there is a Reiner 15 kw., 25 hp. emergency generator set. Batteries are 110-volt Exide.

The vessel has a complete system of pumps, comprising 13 separate units, which are used for bilge, fire, lube and fuel oil transfer and sanitary purposes.



Pilot house of the "Wisconsin", showing the sliding glass doors that protect the Submarine Signal Fathometer recording and indicating units.

Lake Erie Is Productive Fishing Area

Habitat of Ninety-Two Different Varieties, Erie Yields Largest Mixed Fish Catch of any of the Five Great Lakes

LAKE Erie, which at present exceeds any of the other Great Lakes in mixed fish production, was at one time the largest producer of fresh-water herring in the world. The Lake continues to yield an enormous production of herring despite the drawbacks of herring propagation in turbid waters.

Herring, unlike carp, sheepshead, sauger and other soft-flesh fish, cannot tolerate turbid waters now flowing into the southern shores of the Lake. This species of fish must have reasonably clear water and a fairly clean pebbled bottom to spawn effectively. The Lake, on the Ontario side, seems to have clearer water, generally, and a good pebbled bottom which accounts for heavy herring yields taken by Ontario fishermen.

Some years ago the streams flowing into the western area of the Lake ran relatively clear, and wide beds of aquatic vegetation grew in abundance around bays and estuaries. This marine vegetation provided a natural spawning ground for small fish, protection from their larger, cannibalistic brethren, served as a filter and cleanser for muddy and silt-filled waters and sported thousands of insects and other marine life upon which young fish feed and grow.

If this condition had not been disturbed by turbid streams flowing into the Lake, Lake Erie probably still would have the largest resources of whitefish and lake herring in the world. Turbid waters have not only killed considerable aquatic vegetation, but have destroyed an untold number of small lake fish that in time would have been desirable for market. The muddy waters shut out sunlight needed to nurture floating plant and marine life which serve as the major portion of the diet of the progeny of all edible lake fish.

Most of the Lake Erie fish catch now consists of rough fish, and the Lake is a natural habitat for a number of varieties. Ninety-two different kinds of fish and two species of lamprey eel thus far have been identified as making their home in its waters.

The water abounding its islands averages 30′ in depth. In few places between the Michigan and Canadian shores do the waters exceed 35′ in depth in the western area of the Lake. Countless shoals lie but a few feet beneath the surface, and serve very well as a spawning ground for fish.

Sandusky Is Western Erie Fishing Center

With Sandusky, Ohio, well established as the center of the commercial fishing industry on western Lake Erie, several of the larger fish companies maintain extensive docks and fish houses at the port and use it as a base for their fishing craft.

There are a number of large, established operators also located at Port Clinton, Huron, Vermilion and Lorain in the western region of the Lake within Ohio's jurisdiction.

During the season gill and pound net boats leave these ports every morning to head for the fishing grounds in the western end of the Lake. In the Summer most of the fishermen set nets north of Vermilion, east of Kelly's Island.

The fishing tug "W. S. Cahill" operating in Lake Erie.

During Fall, Winter and early Spring they return to fishing grounds west of the islands in quest of whitefish and herring, but usually catch more carp and sheepshead, along with other varieties than they do of the more desirable species of fish. Both pound and gill nets are used for the larger species, while seine nets are utilized for the smaller varieties of lake fish.

In the eastern end of the Lake, centering around Erie, Pa., and Dunkirk, N. Y., the gill net fishing craft produce a considerable amount of whitefish, herring, blue pike, suckers, sauger and a fair yield of lake trout.

Use Modern Equipment

In contrast with the olden days, the major portion of the commercial fishermen operating on Lake Erie are using modern gear and equipment. One of the most outstanding developments is the amazing increase of fish yields since Lake Erie operators have begun to use nylon nets. Kenneth Snider of Erie has reported that 15 boxes of nylon nets can take 300 to 400 lbs. of whitefish, whereas the same number of linen or cotton nets catch about 30 lbs.

F. G. Shaw, head of Circle Fisheries, Erie, Pa., points out that nylon brings in more fish because the nets are less visible in water. The fishermen say they are light, rot-proof, and will not mildew. They are not affected by marine organisms, or oil and gasoline, and do not have to be dried after use. This is said to eliminate the need for extra nets on fishing boats. Another outstanding advantage of nylon, the fishermen contend, is that it hangs better in the water. The nylon nets are reported to have one fault, however; they are too elastic.

Many of the boats operating on Lake Erie are equipped with depth recorders, and, in some instances, ship-to-shore telephones.

Plant of Circle Fisheries Co. at Erie, Pa., and their fishing tugs "Wilma S.", "Jackie Lee" and "Ruth". The Company is managed by William Kearns and uses Starr Nets.

The Canadian Side

On the Canadian side, commercial fishing operations are conducted from virtually all of the ports in Ontario, with principal fisheries centered around Port Dover, Kingsville, Merlin, Ridgetown and Nanticoke.

Setting pound nets about 2 miles offshore and gill nets about 5 miles lakeward, the Canadian fishermen operating between Point Pelee and Maitland produce sizable catches of whitefish, ciscoes, yellow perch, pickerel, pike, trout and other lake fish.

Port Dover is the largest fishing port on the

(Continued on page 51)

Maine Begins Scallop Tagging Operations

The first of a series of scallop tagging operations was launched in the Penobscot Bay area by Sea and Shore Fisheries officials on December 22. Utilizing the Department's patrol and research boat *Explorer*, biologist Fred Baird of Boothbay Harbor said that several thousand of the bivalves would be tagged at various seasons throughout the year.

Through this work the Department hopes to learn more about fishing intensity, natural mortalities, migrations and annual growth. The findings will be used as a basis for recommendations by the Department as to best methods of conservation and development of the fishery.

Marking is being done by means of a white celluloid disc bearing a serial number and "S & SF, Augusta, Me." According to Baird, this is the first time that any definite work has been done to try to improve the scallop fishery. He said that the Department was working closely with Massachusetts and Canadian authorities who had launched similar projects.

Biologist Fred Baird, left, records data as Commissioner Richard E. Reed holds a newly caught scallop during extensive tagging operations by the Department of Sea and Shore Fisheries in the Penobscot Bay area.

Replenishing Lobster Supply

More than 30,000 pounds of lobsters sold by Maine dealers this year never reached the table. Instead, they were bought by the State of Maine, the Sea and Shore Fisheries Commission reports, for propagation purposes.

The lobsters were egg-bearing females, valuable to the Department for "seeding" along the Maine coast. Most of them came to Maine dealers in shipments from Canada. The State paid over $13,000 for them, and planted them in Maine waters from Kittery to Calais.

Another 60,000 Canadian lobsters under or over the legal size for sale in Maine were seized from dealers and released in Maine waters. A V-shaped notch is cut in the tail of all lobsters released which designates them as the property of the State, and a heavy penalty is provided for possession of them.

Seeks New Income Tax Plan for Fishermen

Declaring that the Federal income tax structure should be revised to strike a fair balance between good and lean year earnings of fishermen, Sea and Shore Fisheries Commissioner Richard E. Reed said recently that he had requested Maine's Congressional delegation to investigate the practicability and possibilities of such a move.

He favors a plan whereby fishermen could pay their annual tax on the basis of average earnings for five or six years instead of the yearly computation that now exists.

Colin F. Stam, chief of staff on the Joint Committee on Internal Revenue Taxation, stated that attention now is concentrated on another approach, which would allow a taxpayer to re-calculate at intervals his total tax over a period of years on the assumption that his income for those years was received in equal annual amounts. If the tax calculated for that period is substantially less than the tax already assessed and paid on an annual basis, the taxpayer will receive a refund or tax credit. This is the technique used for farmers and fishermen in Canada, Stam said.

"Billow" Fishing Out of Rockland

The 102′ General Seafoods trawler *Billow* of Boston has been added to the Rockland fleet of the company, and will be commanded by Capt. James Farrell of Owl's Head. The craft has a fish hold capacity in excess of 200,000 lbs.

The trawler *Wind*, formerly under Farrell's command, is expected to be overhauled and returned to sea under a new captain in the near future.

Two Lobster Boats Being Built

Sulo Gronros of the Rockland Boat Shop has under construction a 30-ft. lobster boat for Victor Ames of Matinicus, and soon will lay the keel for a 36-footer for Roscoe Fletcher of Criehaven.

Rockland Transhipping Point for Lobsters

Rockland has been established as a Winter transhipping point for Canadian lobsters en route to New England and New York dealers. The operation is being handled by Ocean Charters and Sims Lobster Co. of Rockland, of which Clifton Look of Addison is one of the principal owners.

Lobsters landed at Rockland for other markets are unloaded in their crates into the harbor and held for 12 hours before further shipment by B & R Express to out-of-State points. By this new system, the lobsters have 12 hours in the water en route and arrive at their destination in much better condition.

New Members on Advisory Council

Three men have been nominated by Gov. Payne for membership on the five-man Sea and Shore Fisheries Advisory Council. They are Thomas F. Winchenbach, Waldoboro clam digger and dealer; Donald Wilson, Eastport sardine packer and president of the Maine Sardine Packers' Assoc.; and John D. Bardwell, York lobsterman. They would succeed Elroy Johnson of Harpswell, Robert Kinney of Bar Harbor and Clifford Look, Addison.

New Herring Tanks Being Tested

As part of a continuing study of herring which is now in its third year, new tanks are being tested at the Boothbay Harbor fisheries station to see if the fish can be kept alive in a captive state long enough for effective observation. The herring study is a co-operative investigation sponsored by sardine packers, the State and the U. S. Government, and is in charge of Leslie Scattergood.

Herring swim at high speeds in closely-massed schools, and previous efforts to hold them in tanks have been unsuccessful because the tanks were not large enough to permit the fish to maneuver. Instead of turning, the herring would smash into the tank walls, with eventually fatal results.

The tanks now being tested at the local experimental station are about eight feet long and have been painted black inside. Heavy covers keep out the light. In the event that these tanks are found to be adequate to hold the fish, a systematic program can then be set up to study the habits and health of various herring schools.

"Bettina" Now "Agnes Elizabeth"

The former 102′ x 23′ x 13′ Gloucester dragger *Bettina* has been purchased by the newly organized Trawler Agnes Elizabeth, Inc., Boothbay Harbor, of which Frank L. Sample, Jr., is president. Her name has been changed to *Agnes Elizabeth*, and following complete overhaul at the Sample yard, the vessel is landing fish at Portland under command of Capt. Daniel C. Train. She has a capacity of 150,000 lbs. and is powered with a 300 hp. Cooper-Bessemer Diesel.

The dragger *Andarte*, which operates for Maine Groundfish & Ice Co., Portland, under command of Capt. Richard Train, recently had her engine, hull and rigging overhauled by Sample's Shipyard. She was painted throughout and equipped with a new 300 fm., 3/4″ wire capacity Hathaway winch with gear box drive and Air-Flex clutch on the power take-off.

Gulf to Have Its First Tuna Canning Plant

Cecil W. Drake, spokesman for a group of West Coast tuna boat owners, recently reported that an agreement has been reached to locate a $300,000 tuna cannery at Pascagoula, Miss. Drake, who operates three tuna clippers and is interested in eight others in the San Diego, Calif. area, said final details of the move now are being worked out.

Five West Coast boats, one from Tacoma, Wash., and four from San Diego, will fish for the new cannery at the start of operations, and it is hoped to increase the fleet to 10 ships soon afterward. The cannery is expected to employ 100 workers at the start of operations.

Joining Drake and a group of local tuna boat owners in backing the project is Joe Martinac, Tacoma, Wash. shipbuilder. The new concern has been named Tuna, Inc.

Construction on the plant is expected to begin next Spring. A site on the main channel adjacent to the L&N Railroad tracks at Pascagoula has been selected for the cannery. The land is controlled by Jackson County, and will be tax-free for the first five years.

Pascagoula is 1,300 miles closer to the tuna fishing grounds off the South American coast than the present location of the 60-million-dollar industry in California.

Fishing Boat "Hazel S." Burns

Fire destroyed the fishing boat *Hazel S.* on December 6, about three miles off the coast at Bay St. Louis, Miss., and two crewmen were rescued about 45 minutes later from waters of the Mississippi Sound.

Clifton H. Sims, Pass Christian, owner of the craft, and his son, Milton Sims, who were aboard her when fire broke out, escaped without serious injury. They were rescued by the boat *Mary Smith*, owned by G. Smith of Pass Christian, and returned to Henderson Point.

Pascagoula Area Channels to Be Dredged

The Board of Supervisors of Jackson County is planning to dredge four miles of channels near Pascagoula, Miss. Permission has been asked of the Corps of Army Engineers at Mobile, Ala. to dredge a 2-mile channel 7' deep in Bayou Casotte and channels 4 miles long to a depth of 8' at the mouth of the Pascagoula River. The District Engineer's office said the channels were being opened for fishing boats at Pascagoula.

The Supervisors also asked permission to dredge sand from a borrow pit 2 miles long and 800' wide to build a protective fill along the Pascagoula seawall.

11-Month Shrimp Catch Shows Gain

In the first eleven months of this year the shrimp catch in the principal production areas of the Gulf totalled 350,400 bbls., which represented a 22% gain over landings in the same period of last year. The New Orleans and Lower Mississippi River area of Louisiana, with 95,500 bbls., accounted for over a quarter of the take. Second position was taken by another Louisiana area, that of Houma, Chauvin and Dulac, where the take was 48,500 bbls.

There was a 5% drop in the oyster yield for the 11-month period. This year the take was 641,500 bbls., whereas in 1948 it amounted to 676,800 bbls. The State of Louisiana had production of 442,000 bbls., or 69% of the entire yield. Landings were heaviest in the New Orleans and Lower Mississippi River section, where they reached 241,500 bbls., followed by Biloxi, Miss., with 116,500 bbls.

Totalling 9,323,100 lbs., the hard crab take dropped over 3 million lbs. from the catch in the same months of last year. The leading section was the New Orleans and Lower Mississippi River area, where 3,944,800 lbs. were produced. Runner-up was the Morgan City, Berwick and Patterson region, with 2,899,800 lbs. The Apalachicola, Fla. area had landings of 1,009,500 lbs.

The salt-water fish catch amounted to 7,472,200 lbs., as compared to 6,610,300 lbs. in 1948. Production was highest in the Mobile, Bayou La Batre area, amounting to 3,176,200 lbs.

Bon Secour Reef Opened to Tonging

Bon Secour reef at the mouth of Bon Secour River in Baldwin County was opened to tongers December 13, as Alabama's biggest oyster harvest in recent years neared a peak. The reef was replanted about 18 months ago.

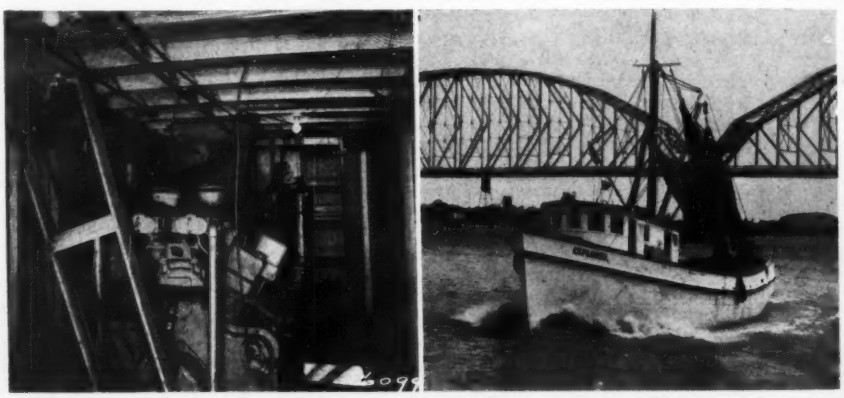
Some 900 tongers are operating daily, which is the largest number since the Conservation Department started keeping records. A replanting program started three years ago is credited with producing the big crop of oysters.

Enough oysters are now being produced along the Alabama coast to supply the entire State, and there is no longer any need for importation of the bivalves.

Shrimp Catch Shows Decline

The commercial shrimp catch in Alabama waters is running about one-half of last season's landings, according to State Conservation Department records.

The seafood inspection officer at Bayou La Batre announced recently that the harvest for the first three months of the season was 3,960 barrels, compared with 7,858 barrels during the same period last year.



The 65' x 20' x 6' shrimper "Explorer", owned by Carlton Fisheries, Morgan City, La., and skippered by Capt. Lester Henderson. She uses Willard batteries, Columbian rope, Linen Thread Co. Gold Medal nets, R.P.M. lubricating oil, and is painted with Pettit paint. Left, the vessel's D17000, 135 hp. Caterpillar Diesel, with 2.5:1 Twin Disc reduction gear, which swings a 50 x 42 Columbian propeller.

"El Mexicano" Unloads Frozen Shrimp

The boat *El Mexicano*, under Mexican flag, arrived at Morgan City, La. December 9 with a cargo of approximately 200,000 lbs. of frozen shrimp consigned to General Seafoods Corp. The *El Mexicano* was formerly the *Twenty Grand*.

Oyster Beds Closed

The Commissioner of the Louisiana Department of Wild Life & Fisheries recently issued an order prohibiting the dredging of oysters in the natural reefs of the water bottoms of the State of Louisiana east of the Mississippi River from December 21 until February 1.

Georgia Ban Against Power Drawn Nets Upheld

The State Court of Appeals last month upheld the legality of a rule of the Georgia Game and Fish Commission prohibiting the use of power drawn nets in all inland salt water fishing.

The court upheld the sentence given to C. M. Briggs, Jr. by a Savannah city court. Briggs attacked the legality of the Game and Fish regulation which was adopted in 1947.

Florida to Redevelop Panama City Area Oyster Industry

Redevelopment of the Panama City section's oyster industry in 42,000 acres of the east and west arms of St. Andrew Bay is the objective of a program placed into pre-operational status at Panama City January 4.

Incentive to increase the number of oyster beds in approved areas of the Bay came following a discussion by Dr. R. M. Ingle, oyster biologist of Apalachicola. Dr. Ingle is assistant director of the Oyster Division of the Florida State Board of Conservation and an authority on oyster cultivation.

A special committee, headed by J. G. Miller as chairman, was named to formulate further plans and investigate necessary phases of the program.

Oyster shell dredging will not be permitted in East Bay, Supervisor of Conservation George Vathis told a group of Pensacola oystermen after a boat trip over East Bay waters recently.

Dr. Ingle, who accompanied Vathis on the trip, told the men that he had been greatly impressed by the large oyster finds in the Bay. Ingle said that shortly after the first of the year he and another biologist from the Oyster Division would be back in Pensacola to begin experimenting toward the rehabilitation of oysters in East Bay.

A group of Santa Rosa County commercial oystermen petitioned the State Conservation Department in November to prohibit any dredging in the East Bay area since they feared it would destroy the potential industry there.

Ingle reported that the State Board of Health had declared some of Florida's waters contaminated rather "hastily". He believes that in some of these areas successful oyster production could be carried on without danger, and said that his Department would probably continue to correct these early conceptions.

Vathis said that more extensive work by the Department toward reviving the oyster industry in the State's productive waters had been curtailed by the lack of funds. The Department is now limited to $50,000 a year.

According to a pamphlet prepared by the Oyster Division, the approximate cost of reclaiming oyster grounds is $100 per acre.

Fine Catches Landed

Commercial fishing, particularly for Spanish mackerel, bluefish and pompano, both in the ocean and Lake Worth, was better the middle of December than in the entire past three fishing seasons.

C. W. Griffin, in charge of a wholesale, commercial fishing house at West Palm Beach, estimated that anywhere from 400,000 to 450,000 lbs. of Spanish mackerel was brought in during a 15-day period by commercial fishermen. This is at least as much, and maybe more than the entire amount caught for the past three seasons. The fishing season runs from approximately November 1 to March 15.

Usually the "top" catches of mackerel and bluefish run for three or four days at this time of year, but the fish have been running in large quantities ever since November 1. Cold weather is the patron to commercial fishermen in this case, fishing experts agree. As long as there is cold weather the fish will come down from waters farther north in big schools.

Kingfishing has been a lot better than usual, and one of the biggest and best runs of pompano ever seen has been reported.

Record catches of Spanish mackerel were unloaded at Miami on December 22, said to be the best since 1941. The day's catch was estimated to be worth $32,000.

All storage space at one major fishery was taken and the overflow was packed in ice on the floors or left unloaded aboard returning boats.

Would Reimpose Size Limit on Trout

Attorney General Richard Ervin has been asked to draw up a regulation forbidding taking of salt water trout less than 12 inches long, the measurement being made from the tip of the nose to the fork of the tail. The action would reimpose a size limit which existed in a law repealed by the 1949 Legislature.

Conservation Director George Vathis reported the legislators had repealed the length limit section of the law by accident while repealing the statute providing a closed season on trout. Vathis said the limit was needed as a conservation measure to permit trout to get large enough to spawn.

The "Avenger", 75' grouper boat, shown tied up at Madeira Beach, Fla. Skippered by F. L. Routh, the "Avenger" is an ex-Coast Guard cutter, and is equipped with twin 225 hp. Gray Diesels. She uses Columbian rope.

Shad Fishing Season Extended

The Cabinet Board of Conservation, meeting at Tallahassee on December 6, extended the shad fishing season by 15 days. The season, which usually opens December 15 and runs until April 15, opened this year on December 1.

May Bid on Sponge Supplies for Army

Tarpon Springs sponge fishermen can bid on sponge supplies for the Army. Senator Pepper of Florida said he was informed that bids from the agents of these fishermen will be welcomed by the Quartermaster Corps.

Pepper protested recently when he learned that the Army was using cellulose sponges. He wrote the Army that while the synthetic sponges were cheaper they were not as durable.

Studying Causes of Red Tide

Dr. Gladys S. King of the University of Miami Marine Laboratory has reported that conditions similar to the red tide have been reproduced in the Sarasota laboratory. The work was in cooperation with the U. S. Fish & Wildlife Service, and is a link in a chain leading to further studies, which may give advance notice of future red tides. Dr. King and her associates produced the "tide" with an organism known as gymnodinium simplex, which is closely related to the tiny creature which flared up in astronomical numbers in 1946-47 and killed an estimated half billion fish in the Gulf.

Patrol Boat for Fish Board Agent

For the first time in its history the salt water conservation department at Ft. Lauderdale has a patrol boat. Fred Cabot, local agent, has received a 20-ft. craft with which to enforce the salt water conservation laws in the county.

General Motors Expands Service at Miami

A new 60' x 56' building added to the Miami branch of the Florida Diesel Engine Sales of General Motors Corporation provides expanded service and parts facilities for GM Series 71 marine Diesel engines. The new shop houses equipment of latest design, including modern engine overhaul stands, a complete injector test and repair department, gas and electric welders, valve grinding machines, etc.

Over 500 feet of dock space is available on the Miami River, including a protected slip 77' wide and 250' long. From the slip, a 350' marine railway provides for haul-outs of boats. When engine removal is desirable, truck or crawler cranes are used to transport the engine from the dock or marine railway to the new service building.

In charge of the Miami branch is John B. Huglen, while headquarters of Florida Diesel Engine Sales is at Jacksonville, Florida, under the direction of E. G. Duerk.

Great Lakes Trout Problem To Be Object of Study

Officials of the U. S. Fish & Wildlife Service, as well as those of Michigan and other north central States, probed further into the Great Lakes sea lamprey and lake trout problems, pooled available information and came up with a decision to make a broad study of the trout and lamprey situation, at the 11th Annual Midwest Wildlife Conference held at Madison, Wis., December 15-17.

Underwater photography and deep-sea divers will be utilized if necessary to determine what is happening to the lake trout in the Great Lakes.

Dr. James W. Moffet, recently announced at Madison as successor to Dr. John Van Oosten of Ann Arbor as chief of the Great Lakes Fisheries Investigations, was elected chairman of the lake trout committee to succeed Dr. Van Oosten.

Dr. Moffett emphasized at the session that since Congress has appropriated a sizable fund for lake trout and lamprey research and has directed the Service to head the campaign, "we've got to find out all about lake trout as our first job."

Fish experts from Michigan, Wisconsin, Illinois, Indiana, Minnesota and Ontario, at the lake trout committee meeting, compared notes on plantings of finclipped baby lake trout in 1944-45-46 and the recovery ratio and growth of these fish in the succeeding years during which all lake trout planting was suspended.

Prior to the meeting, Fred A. Westerman, Michigan's fisheries chief, said that with fewer trout being taken each month because of the lamprey, there was some question as to whether dumping hatchery trout into the same waters is even a partial answer to the problem.

H. H. MacKay, Ontario fisheries chief, and others expressed belief that planting now might confuse researchers in determining results of the six-year experiment now drawing to a close. Similar experiments are underway in Lake Superior off Port Arthur, and Minnesota is contemplating the planting of marked fish in Lake Superior's western region.

Edward Schneberger, superintendent of fish management for the Wisconsin Conservation Department, suggests that the lamprey may not be entirely to blame for the decline of lake trout production in Lakes Michigan and Huron.

Schneberger stated that although there was no doubt the lamprey is a factor, there is evidence indicating that the trout cycle was due for a drop. It is encouraging to note that fishermen now are catching increasing numbers of baby trout.

Michigan Fish Production

The 1949 landings of fish from Michigan's Great Lakes waters probably will not match last year's above normal catch of 30,000,000 lbs., but the catch should come close to an average 26,000,000-lb.-year, according to the Michigan Conservation Department.

Including October reports of 1,800,000 lbs., the catch for the first 10 months amounts to 16,300,000 lbs. In the corresponding period last year, commercial fishermen pulled in 21,200,000 lbs.

Whitefish provided the best October production. Of the 363,000 lbs. taken, Lake Michigan accounted for nearly 300,000 lbs. Herring was second with 322,000 lbs.; fishermen on Lakes Michigan and Huron netted 256,000 lbs. The yellow perch catch on Lakes Michigan and Huron of 233,000 lbs. was third.

Trout Eggs Received at Hatchery

In contrast to the early 1930's when 20,000,000 lake trout eggs annually were brought in by Michigan commercial fishermen from the Great Lakes, the Marquette, Mich., hatchery received less than 1,000,000 this year.

Stock was taken from Lake Superior, where the trout-destroying sea lamprey has not yet reduced the trout population as much as in the other lakes. No eggs have been taken from Lake Huron since 1944 and from Lake Michigan since 1947.

The hatchery at Thompson, Mich., received whitefish eggs from commercial fishermen in the Escanaba, Mich. area, but these were shipped to the Marquette station for hatching.

Escanaba Herring Run Ends

In the Escanaba, Mich., area the herring run was virtually ended just before Christmas and open-water netting was drawing to a close. A total of more than 500,000 lbs. of herring were taken by Escanaba fishermen this season, with nearly all of this production handled locally.

The "William Jr.", 50' tug owned by William Sellman of Manistique, Mich., and powered by a 90 hp. Kahlenberg Diesel engine. Skippered by Melvin R. Sellman, the boat uses New Bedford rope.

Commercial fishermen operating on Little Bay de Noc came up with an estimated take of 300,000 lbs. of whitefish and an equal amount of walleyes, usually referred to as "yellows" by fish handlers, while the lake trout yield was a mere 2,000 lbs.

Whitefish catches were good in the upper Green Bay area the latter part of December, and prices for the fish were high. However, storms and ice hampered the fishermen.

Sizable Trout Hauls from Lake Superior

Following the closed season last Fall, production of lake trout from Lake Superior was better than commercial fishermen in this region had anticipated. Off Munising and Grand Marais, Mich., yields of from 2,000 to 4,000 lbs. per lift were made.

Perch Fishing Allowed in St. James Harbor

Commercial fishing for perch in the harbor at St. James, Mich., on Beaver Island, is again permitted by law. It has been closed to commercial fishing for a number of years.

Offer Ship Chandlery Service

Jensen & Jensen fish market, Escanaba, Mich., commercial fish wholesalers and retailers, now are offering an additional service to fishermen. The firm has established a ship chandlery and fishing supply section in the market where fishermen may buy essential items, such as netting, maitre cord, seine twine, manila rope, net fittings, waterproof clothing and miscellaneous supplies.

Lake Huron Whitefish Production Good

Commercial yields of whitefish were good in several areas of Lake Huron after the closed season had ended. Fishermen, however, were hampered by high winds and some ice had begun to form late in December. Catches of mixed fish have been good.

Revised Lake Erie Charts Available

Three Lake Erie charts have been amended recently, and revised editions have been issued by the U. S. Lake Survey. Coast Chart No. 34 covers the Lake between a point 8 miles east of Ashtabula, Ohio, and a point 15 miles west of Fairport, Ohio, with an inset of Mentor Harbor, Ohio. Chart No. 314 illustrates Buffalo Harbor and Black Rock Canal, New York, and Chart No. 364 encircles the island region at the western end of the Lake and Sandusky Bay.

The charts are obtainable from the U. S. Lake Survey, 630 Federal Bldg., Detroit 26, Mich., at 50 cents each.

Bays de Noc to Remain Open

Some time ago Delta County, Mich. commercial fishermen who operate in Little and Big Bays de Noc protested the idea of some businessmen and resort operators who sought a closure of the two Bays to commercial fishing. When the advocates of the plan heard the fishermen's arguments in the matter, they withdrew.

New and Improved Products for Fishing Boats Exhibited at National Motor Boat Show

A RECORD-BREAKING number of 243 exhibitors displayed their nautical wares at the 40th Annual National Motor Boat Show, held at Grand Central Palace, New York, January 6-14. Sponsored by the National Association of Engine and Boat Manufacturers, the program included a week-long calendar of forums, conferences and group meetings covering various phases of boat operation and maintenance. Following are brief descriptions of some of the exhibits that were of particular interest to commercial fishermen.

Caterpillar Shows Several Diesels

Among the Diesels shown by Caterpillar Tractor Co. was its D397, V-12, 5¾" x 8" marine engine, which was fitted with Lucite valve covers and crankcase doors, permitting visitors to view important working parts. It is rated 400 hp. (continuous duty) at 1200 rpm. and equipped with blower and Falk 4.03:1 air-activated reverse-reduction gear.

Other Caterpillar equipment on display were the Model D364, a V-8, 5¾" x 8" Diesel, rated 215 hp. at 1000 rpm; the D13000, 6-cylinder, 120 hp. engine; the D318, 6-cylinder 80 hp. Diesel, the D315S, 30 kw. self-regulating electric set with 4-cylinder, 4½" x 5½", 1200 rpm. Diesel.

Special Caterpillar features were highlighted by a D397 marine engine base with engine lube oil system, oil filter system and oil scavenging system identified by different colors; a D318 cutaway engine on which an electric motor drive actuated the crankshaft, pistons and valve train, illustrating the four stroke Diesel engine cycle; and a Falk reverse gear cutaway showing the operating principles of the Falk air clutch and reversing mechanism.

International Nickel Monel Equipment

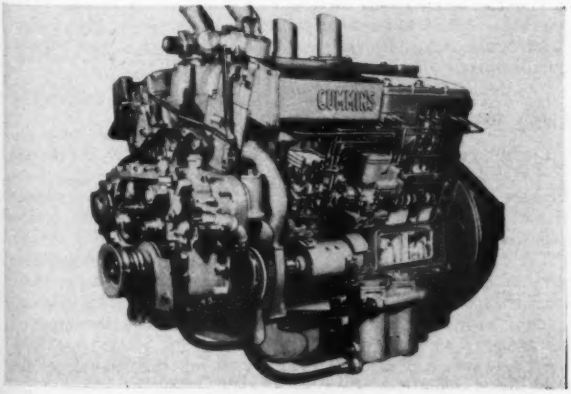
There was a display of Monel propeller shafts actually used in the championship motor boat racers of 1949, at the International Nickel Co. booth.

Among other products at the Monel booth were two compact, engine fresh water coolers with Monel tanks, the Rite-Temp, just introduced by Boat Improvement, Inc., of Long Island City, and the Wixkuler, made by Wix Cooler Company of Seattle.

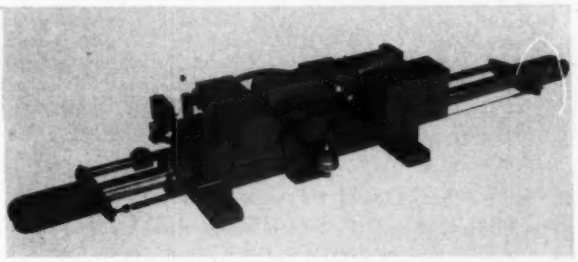
Several designs of corrosion-resistant fuel and water tanks were displayed in full size, including a non-gum-forming fuel tank. Another new item was the heat and sea water-resistant Monel exhaust manifold just adopted for use in Chrysler marine engines.

Other important items on display were the new, S.A.E. approved, filleted type keyway and cutters, recommended to lengthen the fatigue life of any type propeller shafting, the Sea Maid sink bowl, Willis Monel-sheathed galley, and corrosion-resistant boat fastenings including all types of Monel wood screws, special fastenings and Anchorfast nails.

Also shown was an all-Monel crab trap used by West Coast fishermen for Pacific crabs, which is light in weight, completely rust-proof and highly resistant to abrasion by sandy bottoms.



Cutaway view of NVHS-1200, 550 hp. Cummins Diesel.



Sperry Gyroscope hydraulic ram for power steering.

Sperry Hydraulic Steering Ram

Sperry Gyroscope Co. demonstrated a new hydraulic ram which provides power steering at half the cost of equal-powered electric steering engines. With the new ram small craft with limited power can now employ power steering and automatic pilots. The hydraulic power pack which drives the ram derives its power either from the boat's main propulsion engine through belt drive or from a small electric motor.

The power pack is in effect a controlled oil pump which can produce enough pressure to apply over 7000 lbs. of force to the ram piston. Oil flow to the ram piston is controlled by electrically operated valves to provide the precise amount of piston travel and force needed for the desired rudder position.

Designed primarily for use with the Sperry Magnetic Compass Pilot, the new ram is supplied in four sizes to meet steering requirements of vessels approximately 60 to 125' long. It can also be adapted for use with the Sperry Gyro-Pilot, Triple Steerer, or any of the Sperry steering systems and controls.

The ram produces positive rudder control even at very small increments of motion. It is small, yet rugged and powerful. Largest ram provides 3000 lbs. pull with cable travel up to 38", weighs 143 lbs. and is 62½" long.

Pettit Has Ship Chandlery Replica

A replica of an old New England ship chandler's store front was used to present the Pettit Paint Company's complete line of marine paints and varnishes. Seen through the bay window of the "store front" was an illuminated cut-away of a modern boat surrounded by flashing arrows pointing out exactly where each type of paint should be used—on spars, deck, topside, dinghy, boot-topping, and bottom.

For the individual boat-owner, Pettit offered a free 24-page booklet which fully describes how to prepare a metal or wood surface and apply paint. In addition, it provides many helpful tips and hints for the boatman who likes to do his own painting.

The Company featured a complete line of its famous brand products including "Old Salem" Yacht Whites and "Old Salem" Spar Varnishes; a full range of colors in its "Shipendec" line; as well as McInnes Anti-Fouling, Copper Bronze and Pettit anti-fouling yacht copper bottom paints.

New products offered for the first time this year include a surfacer for white and mahogany, a new canvas cement canvas filler and plywood filler.

Cummins Presents Large, High-speed Diesels

Three new high-horsepower, high-speed Diesel engines were presented by Cummins Engine Co. An activated, cutaway version of the new NVHS-1200 Cummins Diesel gave boat owners an opportunity to study the mechanical features of one of the most powerful high-speed Diesels, a four-cycle, 12-cylinder, V-type supercharged engine that has a maximum rating of 550 hp. turning at 2100 rpm.

Another Cummins Diesel in the exhibit was the NVHMR-1200, an unsupercharged marine model corresponding to the basic en-

gine shown in the cutaway version. This V-type, 12-cylinder engine has a rating of 264 hp. at 1800 rpm. in continuous, heavy-duty service, and a maximum rating of 400 hp. at 2100 rpm.

The third Cummins Diesel in the exhibit was the Model NHRMS-600. This supercharged marine Diesel has a rating of 188 hp. at 1800 rpm. in continuous, heavy-duty service, and a maximum rating of 300 hp. at 2100 rpm.

All three engines in the Cummins display are equipped with the completely new Cummins "DD" fuel pump. This new pump incorporates the time-tested and exclusive design features of the Cummins fuel pump used in other models, but contains a double disc arrangement. One disc allows fuel to pass into the metering pump, while the other performs the distributive function only.

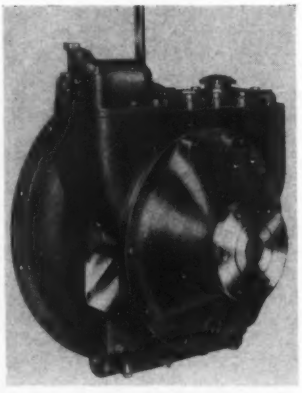
Michigan Wheel Displays Propeller Line

The Michigan Wheel Co. exhibit at the show featured their Machined-Pitch line of propellers which are available from 8″ diameter through 60″ diameter as well as the Aqua-Master and Weedless lines of propellers.

This supplemented a complete display of Michigan Aqua-Master and Aqua-Jet outboard speed wheels, hardware and accessory equipment.

New Snow-Nabstedt Hydraulic Reverse Gear

Snow-Nabstedt Gear Corp. showed for the first time, its new hydraulically-actuated reverse gear model #3757, which is fully enclosed and will fit the flywheel and flywheel housing to replace its predecessor, model #3755, manually-operated gear.



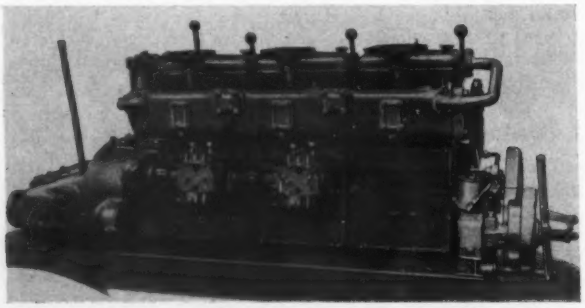
Snow-Nabstedt #3757 hydraulically-actuated reverse gear.

The pump for pressure and lubrication is incorporated in the reverse gear and provides sufficient oil for quick operation and lubrication even at low idling speeds. Shifting from full speed ahead to full speed astern can be done within one and one-half seconds at these low speeds. At high speeds, emergency shifting can be done in a second or less.

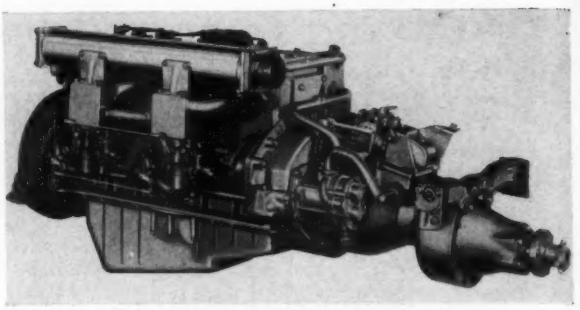
Simplicity of design has been stressed, with all oil passages being large, short and direct. A safety locking device is provided if the pressure fails, and the forward clutch may be so locked within a few minutes.

The new gear can be equipped with reduction gears from 1:1 up to 4.4:1 without disturbing the alignment between the reverse gear and the engine flywheel; also, reductions turning either port or starboard at full speed and full power are available.

The S-N design principle of driving directly into the reduction and by-passing the complete reversing mechanism, has been maintained. As a result, the gearing and bearings take virtually no wear during forward driving operation.



Lister-Blackstone Model 616MG marine propulsion Diesel, rated 63 hp. at 1200 rpm.



Chrysler 160 hp. "Majestic" marine engine.

Chrysler Increases Power Range

The showing of seven engines with many new improvements and innovations, marked a greater power range for Chrysler marine engines. To the Ace, Crown and Royal models, which previously comprised the Chrysler line, have been added the Ace Special, Crown Special, Royal Special and the Majestic. All models are six cylinder, except the eight cylinder Royal and Royal Special.

The Majestic, an innovation in the Chrysler line, has 4″ x 5″ bore and stroke, develops 160 hp. at 3000 rpm. and has piston displacement of 376.9 cubic inches. Standard equipment includes sodium cooled valves, silcrome steel stellite faced valve seats for both intake and exhaust valves.

Horsepower ratings of the other engines are: Ace, 87; Crown, 104; Royal, 135; Ace Special, 105; Crown Special, 125; and Royal Special, 165. The regular models turn at 2800 rpm., while the Special models are rated at 3600 rpm. The Chrysler hydraulic control is available for every model.

All engines are obtainable in straight drive or with reduction gears. The exclusive Chrysler Vee Drive, built as an integral part of the engine, also is available. Helical reduction gears, with a high degree of interchangeability, can be assembled in four different positions to accommodate various shaft angles and to fit into diverse interior layout plans.

New Surrette Battery Charge Retainer

A Charge Retainer was introduced by Surrette Storage Battery Co. Especially designed for marine application, the new trickle charger eliminates guess work in charging batteries. It has a fully insulated transformer, a milliamp meter indicator, and charge control turning knob, and can be placed in use instantly by plugging into any 110-volt A.C. outlet or D.C. upon special order. The new unit is ideal for preserving the charge in batteries not in use, thus avoiding deterioration which may ruin lead acid storage batteries if they are allowed to stand in 75% or more discharged condition.

Surrette also showed its D.C. Shore Converter which makes it possible to use shipboard electrical equipment while laying at dock without running the auxiliary generator, at the same time maintaining the battery at full charge.

Surrette batteries on display included their GTS and HHG types, in 32 and 110-volt sizes, with cut-a-way models to show construction features, and a complete line of 6 and 12-volt starting batteries.

Lister-Blackstone Shows Propulsion Diesels

Lister-Blackstone, Inc., showed 160, 63, 40 and 30 hp. propulsion Diesels, a 21 hp. auxiliary Diesel and a 16 hp. auxiliary set. The Lister-Blackstone marine engines are 4-cycle, medium speed, heavy duty full Diesels, which are conservatively rated and of basically simple design.

The "Listard" (Vander Horst patents) cylinder sleeves (liners) have exceptional durability, being chrome processed. Another special feature is the Lister patented Dual Compression (air-cell) system, providing easy cold starting together with optimum performance on load.

Fresh water cooling is standard, utilizing the "Simplato" interchanger. This is a plate-type combined heat-exchanger and luboil cooler of British Twin Disc Co. design, which is compact

and accessible. Air starting is used on engines above 70 hp. Alternative air or electric starting is available below 70 hp., with hand starting as well on all engines of 40 hp. and below.

The 4-cylinder 160 hp. engine is representative of the EPVM range which covers 2 to 8 cylinders, at 40 hp. per cylinder at 600 rpm. Lister-Blackstone epicyclic gear reversing with hydraulic control, is provided on the engines up to 200 hp. and direct reversing (optional clutch) on the 6, 7 and 8-cylinder models, with optional reduction gear for all. The 4-cylinder model weighs 16,500 lbs. with accessories and is 12'6" long.

Bludworth Displays New Direction Finders

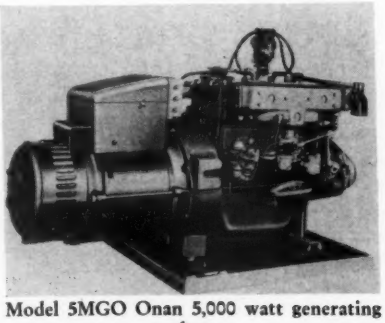
Bludworth Marine exhibited a new line of three frequency band direction finders. They were the inside loop "Mari-Guide", the remote loop "Marine Pilot", and the outside loop "Marine Arrow". It is possible to take bearings with these new models on marine beacons, aircraft beacons, broadcast stations, and other vessels, as well as receive standard broadcasts, weather reports, and time signals.

A visual aid to more accurate bearing taking is the Bludworth patented "Nuldikator" which helps get finer "nulls" by means of a needle dial.

Also displayed were Bludworth's standard line of direction finders, three depth indicators and a recorder. One small model Depth-o-meter has been reduced in price to permit greater use of supersonic sounding devices by small craft operators.

Onan Shows New 5 KW. Marine Light Plant

A new 5,000-watt, gasoline-driven marine electric generating plant, Model 5MGO, was exhibited for the first time by D. W. Onan & Sons, Inc. The new plant produces 115-volt, 60-cycle, alternating current, and other standard A.C. and D.C. voltages are available. It is specially designed for close inherent voltage regulation and for ample overload capacity. Direct connection by a semi-flexible drive disc assures permanent alignment.



Model 5MGO Onan 5,000 watt generating plant.

The 5MGO is powered by a water-cooled, 4-cylinder marine engine, self-emptying carburetor drip-pan, rubber-impeller marine water-pump, flame-arrestor, water-cooled manifold and exhaust muffler, high water temperature and low oil pressure cut-offs.

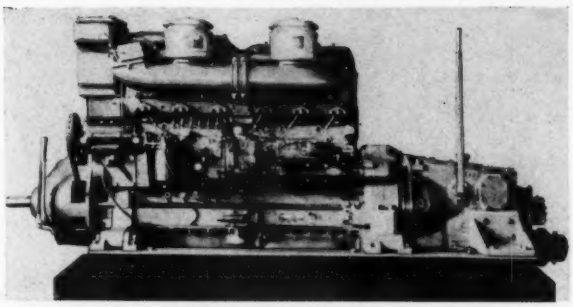
The control box is mounted over the generator, and for automatic service, an Onan Wall-Mount Automatic Control Panel is optional. Supplied with current from any 12-volt automotive type battery, the plant's generator acts as a powerful motor for cranking the engine.

Three-point shock-mounted over a large drip-pan, the 5MGO is exceptionally compact, being 41¾" long, 20¼" wide, and 27½" high and its net weight, less batteries, is 605 pounds.

Lathrop Announces 100 Hp. Diesel

Lathrop Engine Co., marking 53 years of continuous operation, announced a new 100 hp. Diesel engine, the D-100, which will be ready for delivery by early Spring. On this engine, the power is taken off the flywheel end, and one of the compact flywheel mounting types of reverse and reduction units will be used. The engine will be calibrated to operate at a maximum of 1,000 rpm. when developing 100 hp. and will accommodate 32-volt generators and auxiliary drives.

The Lathrop display comprised five models representing their diversified line of 21 gasoline and Diesel engines. Gasoline engines were the 45 hp., 3200 rpm., 4-cyl., 133" displ., 440 lbs. Model LH-4; the 132 hp., 3200 rpm., 6-cyl., 339" displ., 936 lbs. Model LH-Super; the 130 hp., 1800 rpm., 6-cyl., 585" displ., 1700 lbs. Mystic 125 Model. Diesel engines were the 60 hp., 900 rpm. 4-cyl. 665" displ., 3000 lbs. D-60 and the 187 hp., 1600 rpm., 6-cyl., 935" displ., 5100 lbs. DH-200 Diesel models.



Lathrop DH-200 Diesel, rated 187 hp. at 1600 rpm.

Lathrop gasoline engines are divided into three classifications—heavy-duty, medium-duty, and light-weight, high-speed, with a power range extending from 21 to 175 hp. In addition to the 60, 100 and 187 hp. models, Lathrop Diesel engines include 50, 80, and 90 hp. models.

Gulf Oil Promotes Cruiseguide Service

Cruiseguide Service and Harbor Books were featured in Gulf Oil Corp. exhibit, which told in an interesting way the specialized uses of Gulfpride Marine and Gulfpride Marine Outboard Special oils. The major attraction of the exhibit proved to be a moving picture of the greatest marine racing events of 1949.

International Paint Stresses Color Selection

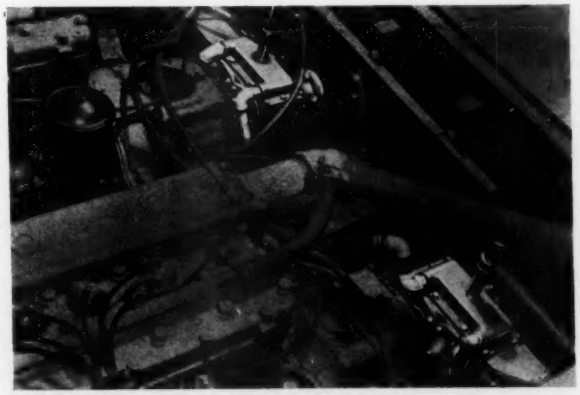
To aid the boat painter in selecting a color combination, International Paint Co. provided a display of miniature boat profiles, both sail and power, each painted in a different color combination. Every color shown was one of the twenty-two standard Interlux colors.

As a part of their war on mildew and rot of fabric, rope and wood, International has brought their various preservatives together in one line under the label Inter-Tox Preservatives. The line consists of a series of specialty products for protecting wood to be painted, wood to be varnished, rope, sails and other canvas. They have two other interesting products, one an antiseptic wash to prevent formation of mildew on painted surfaces, and another an additive to paint which makes it mildew resistant.

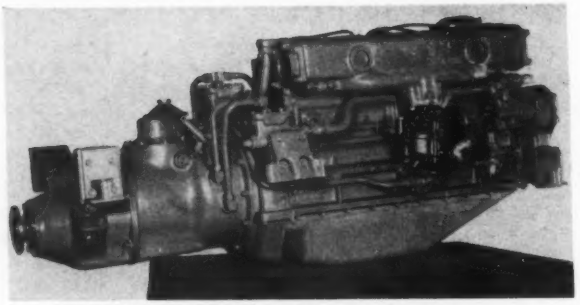
International has formulated a bottom primer for steel vessels, Interlux Primocon, and has prepared a method of general refinishing of metal boats.

Walter Has Coupling-Type Reduction Gear

G. Walter Machine Co. products exhibited consisted of reduction gears, transfer drives, marine reverse gears, Clean-Flo Cooling Systems and propeller pullers. These lines have been fur-



G. Walter Machine Co. reduction gear couplings in twin screw boat.



Packard six-cylinder, 100 hp. marine engine.

ther improved and expanded, and important changes have been made on the complete line of Clean-Flo Cooling Systems.

A newly developed item is the Walter reduction gear coupling. This reduction gear can be directly connected to any engine the same as a coupling. It bolts with front flange to outdriving flange of engine and then connects with outdriving flange of gear to propeller shaft flange. This gear unit is unusually light and very short which makes it suitable for close space installation. No flexible couplings or line up to engine bed is required. Only one bolt is needed to fasten one side of the gear to the engine bed to prevent the housing from turning.

Socony-Vacuum Features Lubricants

Socony-Vacuum Oil Co., Inc. featured its various marine oils and lubricants, including new Mobilube Gx90 outboard gear oil and Mobilgrease Outboard. "Cruise Guides", which have been revised and printed on water-resistant paper, were distributed. Information was available on Mailport Service, provided at Mobilgas stations on the waterfront.

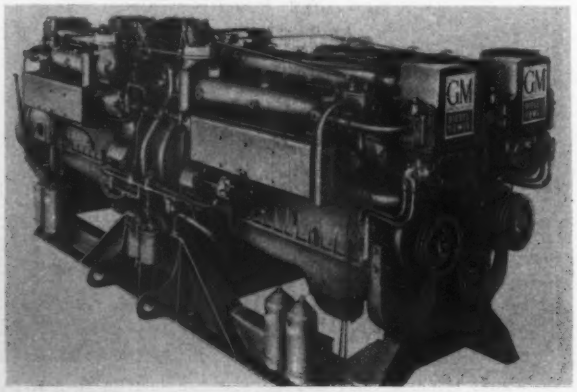
Detroit Diesel Quad Unit Exhibited

Detroit Diesel Engine Division of General Motors displayed an 800 hp. General Motors "Quad 6" multiple-engine unit, such as is being used in fireboats. The Quad unit has a 520 shaft hp. rating at 1600 rpm, and with 5:1 or 6:1 reduction can handle wheels up to 80".

Also shown was a matched pair of 200 hp. 6-cylinder G.M. Diesel engines fitted with special G.M. marine gears for close-quarter installation. An activated, 3-cylinder cut-away engine showed how the 2-cycle principle gets high horsepower from a compact engine, and another activated cutaway display demonstrated the new hydraulically-controlled G.M. marine reverse and reduction gears.

The new General Motors torque converter, available on G.M. Diesel engines for winch operation on fishing-boats, was revealed in a sectional cut-away. Other exhibits included an "injector-popper" device, operated by the viewer, a 20-Kw G.M. Diesel single-bearing, heat-exchanger-cooled, marine generator set.

General Motors Series 71 Marine Diesels are available in 2, 3, 4 and 6-cylinder single engines, "Twin 6" and "Quad 6" sizes.



"Quad 6" General Motors Diesel, Model 24001 B.

For marine propulsion they are all equipped with the "finger-tip control" General Motors hydraulically-operated reverse and reduction gears and push-button electric starting.

Packard Presents 1950 Marine Engines

Packard Motor Car Co. exhibited its 1950 Marine Eight and Six cylinder engines, a cut-away model of a Packard hydraulically operated reverse gear and colored slide films of Packard-powered boats. The Eight was mounted complete with instrument panel and propeller to show the smooth shifting action from ahead to astern of the "Finger-Tip Control" reverse gear.

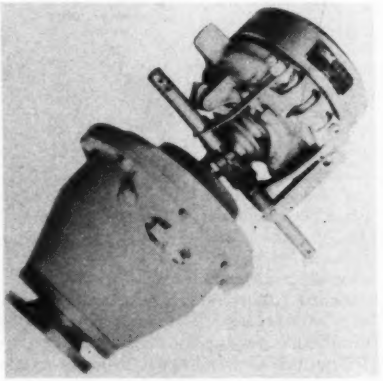
Major engineering improvements in the design of the engines were revealed. The valve mechanism has been designed to prolong engine life by use of phosphate-coated guides, cadmium-plated valve springs and non-corrosive steel in the valve stems.

Packard now offers as special equipment at extra cost on both the 150 hp. Eight and 100 hp. Six, "free-to-rotate" exhaust valves for use in heavy duty service. A new high-range thermostat improves gasoline economy and reduces oil sludging and cylinder wear.

The Company's all-hydraulic reverse gear makes possible the use of 100 per cent power in reverse. In the Packard gear, the forward clutch and reverse band are activated by hydraulic pistons, and thus all cams, levers and toggles have been eliminated from the forward drive. All mechanical adjustments for wear have been eliminated in the reverse gear and the hydraulic pistons automatically compensate for this wear. The gear has its own oil supply, which is not contaminated by carbon and dirt that affects the engine oil.

New Capitol Gear for Ford Engines

Two reverse and reduction gears were shown by Auto Engine Works, Inc., designers and manufacturers of the Capitol line of reverse and reduction gears.



Capitol E-F reverse and reduction gear.

One unit was the new high speed model EF gear designed for use with Ford and Mercury 6 or 8-cylinder engines. The EF gear is a rugged, compact unit, easily installed. It embodies many highly desirable features, the most important of which is positive lubrication to all bearings and gear meshes, provided by a simple durable pump incorporated within the unit itself. Also available for the Model EF gear are reduction gears of 1½:1; 2:1; and, 2½:1 ratio.

The other gear shown was the "Capitol" YC reverse and reduction gear combination. This gear includes outstanding features such as a wet clutch system, independent lubrication, and smooth operating bevel reverse and helical reduction gears. The YC gear is designed for engines up to 340 hp. at 2600 rpm. It is available with ratios of 1½:1; 2:1; 2½:1 and 3:1.

Danforth Anchors Shown by Tiebout

A representative selection of Danforth anchors was featured at the booth of W. & J. Tiebout, Inc., with William Danforth in charge. A sand box demonstration enabled spectators to test the holding power of the Danforth, which is made in sizes from 2½ to 21,000 lbs.

Morse Throttle and Clutch Control

A simplified throttle and clutch control for marine engines with hydraulic gear has been developed by Morse Instrument Co. The control's single lever provides complete control of both clutch and throttle, with positive stops between clutch

and throttle range that eliminate the possibility of over-travel and blasting of engine in fast shifts. The clutch cannot be disengaged or reversed without first closing the throttle.

Among other features are an automatic increase in engine speed with emergency reversing to prevent stalling, and simple throttle control in neutral. The new control is all-mechanical, employing heavy push-pull cables and a mechanical control head to assure constant and positive regulation of clutch and throttle under all conditions.

New Buda Diesel Shown

A marine Diesel shown for the first time by The Buda Company was its model 6-BDMR-273 Diesel, of the new "BD" series of marine engines. This new Diesel has 6 cylinders, 4¾" bore, 4⅛" stroke, with 273 cubic inch displacement, and develops 72 hp. at 2400 rpm. Its compactness, ruggedness, low weight and small over-all dimensions make it easy to mount in small fish boats.

Other products being shown for the first time were 10 kw. and 3 kw. Diesel electric marine type generator sets. The units are compact and complete with controls and mounted entirely on their own bases. The engines which drive the generator sets are of a new BD-series of high speed, compact, low weight engines.

Also on display was the large model 8-DCMR-2505 Buda Diesel marine engine which has 8 cylinders, 6¾" bore and 8¾" stroke, and develops maximum of 336 hp. at 1200 rpm.

In addition Buda exhibited a 4-BDMR-153, 40 hp. Diesel, a 6-DTMR-317, 90 hp. Diesel, a 6-DCMR-844, 200 hp. heavy duty Diesel, and a 2000 lbs. fork lift truck, suitable for loading boats and for operating on docks.

Red Wing Exhibits Diesel Line

The new Model D-160 "Super-Duty" 160 hp. Diesel was shown by Red Wing Motor Co. It is a 6-cylinder, 4-cycle engine of overhead valve type with bore of 5¼" and stroke of 6" and displacement of 779 cu. inches. The Company makes a companion model, the D6-200, a 6¼" x 6½", 1197" displacement, 200 hp. engine. These engines are designed for heavy duty boats from 50' to 100' in length.

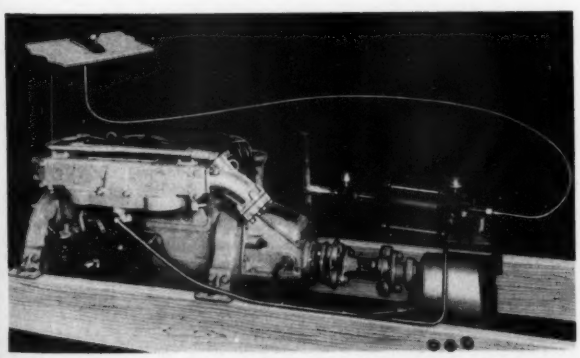
Another Diesel on display was the 65 hp. Red Wing, built for boats in the 25-50' range. All the Diesels are available for direct drive or 2:1 and 3:1 reduction gears.

Red Wing gasoline models shown were the 6-cylinder, 58-90 hp. Hiawatha Special, the 4-cylinder, 25-45 hp. Arrowhead and the 20-40 hp. Arrowhead Junior.

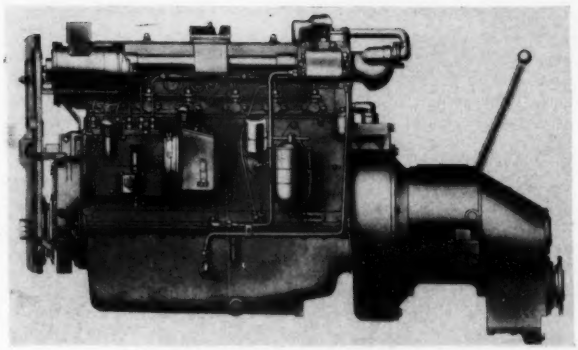
Submarine Signal Electronic Instruments

The Submarine Signal Division of Raytheon Manufacturing Co. exhibited its full line of electronic marine products several units of which were in operation for demonstration purposes. These included Fathometer Jr. depth sounders, both indicating and recording types; Raytheon marine radio telephones and the Cape Cod Navigator direction finder.

One of the products featured was the Fathometer Jr., Model 1373, which makes a permanent record of the depth under the keel on recording paper by means of a stylus. A large viewing window makes possible the inspection of a full hour's depth recordings.



Model 100 Gray with vee-drive gear, vacuum type shifter and water-cooled exhaust elbow.



Buda Model 6-BDMR-273 Diesel.

Fathometer Jr. depth sounders also are available in indicating models which show the depth by means of a flashing red light on a calibrated dial. Either type will measure up to 100 fathoms, and is enclosed in a watertight, cast aluminum case.

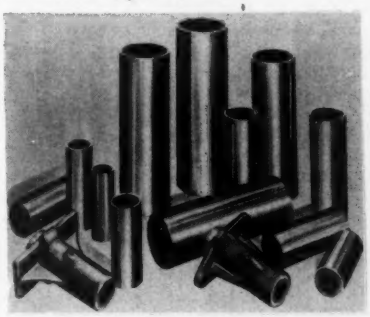
Kelvin-White Compasses and Direction Finder

The Tracker radio direction finder, and Constellation and Corsair compasses were shown by Kelvin-White Co. The Tracker contains two superhetrodyne receivers, a highly-sensitive one for the beacon band and one for the broadcast band. Both circuits use the same loop, audio-amplifier and self-contained batteries, giving upwards of 30 hours continuous service or 200 hours of intermittent use.

The Constellation compass has the gimbal ring inside, making the lubber lines and card much more steady, especially in rough weather. Made in 5", 6", 7" and 8" sizes, it is adaptable to Kelvin-White binnacles or may be flush mounted at any angle.

Goodrich Bearings Exhibited by Moffitt

B. F. Goodrich Cutless bearings were displayed by Lucian Q. Moffitt, Inc., national distributors of the bearings. Ameripol oil resisting rubber now is used in all Cutless bearings for commercial vessels. Ameripol was developed by Goodrich through years of research and was definitely established as a superior bearing wearing material when used on the largest Naval vessels.



Various sized Goodrich Cutless rubber bearings.

Ameripol Cutless bearings have better heat, oil and wear resisting qualities, and are recommended for operation in any waters. The design of the bearing makes them particularly adaptable to shallow draft operation.

Cutless bearings are water lubricated and the soft rubber permits abrasive particles to be rolled into water grooves. Sand and silt are flushed from the bearing by the lubricating water preventing scoring of propeller shafts.

Gray Introduces Vacuum Control

Gray Marine Motor Co. announced a new type vacuum control which may be easily installed with any engine of the type that Gray builds. This is claimed to have advantages over hydraulic shifting in that it permits the operator to "nudge" the clutch, useful in docking. A feature of it is a "slave shaft" which makes the reverse gear lever faithfully follow the touch of the operator, to duplicate the "feel" and positive control of manual shifting.

A force of nearly 300 pounds is exerted by the driving piston, ample to handle the largest reverse gears effortlessly, and it operates even at engine cranking speed. Only one short

section of tubing to the engine's manifold is required, and the mechanism is operated by means of the same type of flexible cable used on the hydraulic controls.

Reinstated to the Gray line is the 112 cubic inch "Lugger Four-112", rated 30 hp. at 2000 rpm., and the 140 cu. in. "Express Four-140", rated at 55 hp. at 3000 rpm.

Gray now is using a new type pump with single neoprene impeller, and a new water-cooled exhaust elbow, with copper sleeve inside cast-iron jacket.

Succeeding the vee-drive gear which Gray has supplied for years, a compact new unit has been introduced, with low shaft angle and weighing only 85 pounds. Drive ratios for this unit which saves space and increases hold capacity, include 1.1:1, 1.28:1 and 1.53:1, reduction or overdrive.

Radiomarine Features Radar and Loran

Radiomarine Corporation of America exhibited its new small radar and direct-reading loran, as well as a complete line of radiotelephones and radio direction finders. Known as Model CR-103, the new radar operates on a wavelength of 3.2 centimeters and has the power and sensitivity to pick up ships or land-marks at 20 miles, or objects down to 75 yards from the antenna.

The new Radiomarine Model LR-8802 direct-reading loran receiver enables the navigator to determine his position accurately and quickly at ranges of 750 miles in daytime and 1400 miles at night, in fog, darkness and storms. A complete reading of the time difference appears on one meter, making interpolation unnecessary. The equipment also features automatic frequency control that holds the signals on both the master and slave pulses even under severe fading conditions.

Radiomarine also exhibited their new VHF (very high frequency) single-channel two-way radiotelephone which has a limited line-of-sight range. It can be used either as a shore station or aboard a boat, providing ship-to-shore and ship-to-ship communication.

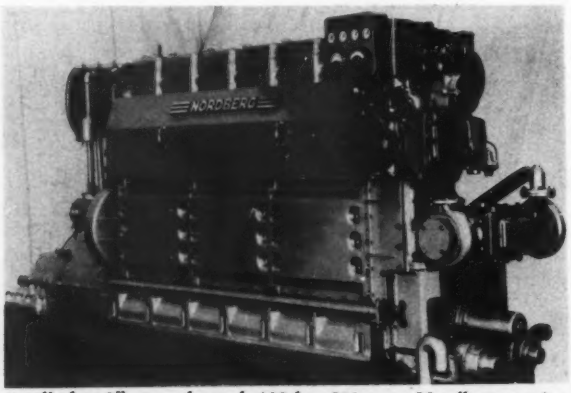
Columbian Bronze Propellers, Engine Controls

Columbian Bronze Corp. displayed marine propellers, engine controls and a diversified line of accessories. Propellers were emphasized and personnel were on hand to discuss propeller problems.

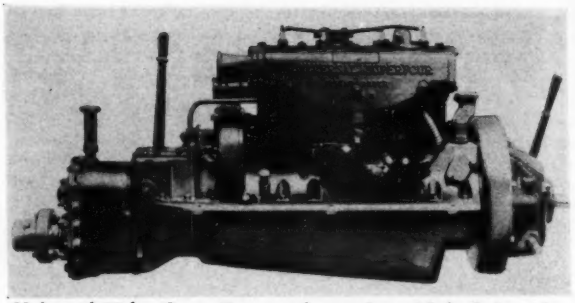
Columbian's display featured colored slides illustrating production of marine propellers. Operating models of the Columbian electric capstan, Magicam clutch and throttle control, and Model 91 all-hydraulic clutch control were shown, being mounted so that they could be put through their paces by the public. The Model 91 has been thoroughly tested during a four-year period and has seen strenuous service in workboats.

Universal Motor Stresses Forward Clutch

A notable trend in the Universal Motor Co. engine line this year is the availability of forward clutch and power take-off. This equipment can be furnished for the Universal 90 hp. Cruiser Six, the 110 hp. Sea Lion Six, the 60 hp. Blue Jacket Six, the 50 hp. Super-Four and the 45 hp. Blue Jacket Flexifour.



6 cylinder, 9" supercharged, 335 hp. 500 rpm. Nordberg marine Diesel.



Universal 50 hp. Super-Four marine engine with built-in reduction gear and forward clutch and power take-off.

The power take-off, built in at the factory, can be supplied on either direct or reduction drive models.

Among Universal models particularly suitable for commercial fishing is the 25 hp., 2500 rpm., 95" displacement Utility Four. It is built in magneto ignition and electric starter models, also in direct and reduction drive, and is available as a special fuel oil-kerosene burning model. The 1-cylinder 8 hp. Fisherman model is available with or without built-in reversing gear. The Fisherman develops its maximum horsepower at 1200 rpm. and will handle a 16" diameter 3-blade propeller. A new all-bronze moisture-proof timer ignition, requiring only a hot shot battery, is standard equipment.

New models added to the Universal marine electric plant line include a 300-watt, 6-volt, battery charger; a 600-watt, 12-volt battery charger; and three entirely new 32-volt battery charging models of 750, 1200 and 3000-watt capacities. All of the plants are powered with 1-cylinder, water-cooled gasoline engines with push button electric starting, and include the essential safety features necessary to assure approval for permanent installation below deck.

Ferdinand Shows Caulking Gun

A new caulking gun which uses a cartridge of Seamseal compound was featured by L. W. Ferdinand & Co., Inc. Other products on display included Ferdiseal liquid marine glue, Ferdico canvas cement and liquid waterproofing, containers for which now have re-designed labels.

Albina Utility Power Take-Off

Albina Engine & Machine Works showed utility power take-off units which can be chain or lever operated, and are adaptable to any engine. Both single and double sheave models are available. Sheaves and thrust collars work on a non-rotating shaft, eliminating wear and freezing up at high speeds. When pressure is released from levers, take-off sheaves are automatically disengaged by compression springs. The unit may be controlled remotely from any location.

Albina also displayed its Atlas anchor windlasses, which are made with gypsy or cable drum for electric or hand operation.

Advance Marine Has Penetrating Oil

Life Penetrating Oil, a new crankcase additive for gasoline and Diesel engines was demonstrated on a testing machine by Advance Marine Products Corp. Added to regular lubricating oil, the product covers bearing surfaces with a tough friction and heat resistant film, thus reducing friction and heat and prolonging engine life. It increases horsepower, reduces repair bills and helps prevent corrosion. By cleaning as it lubricates, Life oil softens and dissolves carbon gum and sludge deposits.

Nordberg Offers Diesel and Gasoline Engines

Engines shown by Nordberg Mfg. Co. included a 4-cycle, 6-cylinder, 9" supercharged marine Diesel, a Nordberg model 4FS-1 engine with generator and four Nordberg gasoline marine engines. The supercharged large Diesel is rated 335 to 480 hp. at 500 to 720 rpm. It is direct reversing and available with 2:1 reduction gear. The engine has high velocity cooling, and each cylinder has an independent fuel pump. Pressure lubrica-

tion is provided by two rotary, positive lubricating oil pumps, gear driven from the crankshaft.

The 4FS-1 engine is a heavy duty one-cylinder Diesel engine generator unit rated 15 hp. at 1800 rpm. and 10 hp. at 1200 rpm. This engine has a 4-½" bore and a 5-¼" stroke.

The four Nordberg gasoline marine engines exhibited consisted of a Model 230 with direct drive; a Model 320 with a 4.12:1 reduction gear; a Model 340 with 1.88:1 reduction gear and a Model 340 with 2.44:1 reduction gear.

The Nordberg gasoline marine engine is available for direct drive or reduction gear drive with ratios of 1.88, 2.44, 3.32 and 4.12 to 1, which makes them applicable for commercial fishing and work boats up to 50'. The horsepower range is from 52 to 135.

Two Meco Diesels Introduced

Two new Meco Diesels were on display at the Mechanical Equipment Co. booth. They were the Model B6, which has a continuous rating for fishing service of 57 hp. at 2000 rpm., and the Model D6, rated 135 hp. continuous duty at 1600 rpm.

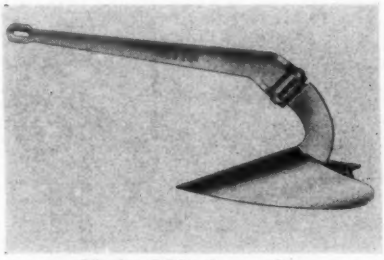
The B6 Meco is a compact, light weight, 6-cylinder Diesel with 3¼" bore, 4" stroke and 265" displacement. It is fitted with vibration eliminator mountings, and its weight, with heat exchanger cooling, is 1120 lbs.

The D6 Meco has 6-cylinders with 5¼" bore, 6" stroke and 779" displacement. Its features include fingertip reverse control, oil cooled pistons, low weight per horsepower and a patented combustion system that provides quick starting and rapid acceleration.

Other Meco Diesels include the 6¼" x 6½" Model E., with continuous rating of 160 hp. at 1300 rpm., and the 8½" x 8½" Model G, rated 280 hp. at 900 rpm.

Maxim Silencers, Anchors and Stoves

The Maxim Silencer Co. featured its exhaust silencers which are made in a variety of models for either wet or dry exhausts to cover requirements for silencing where engine installation is above or below water line.



Maxim CQR plow anchor.

When weight and space are important factors, Maxim offers the new Model MO wet type marine exhaust silencer constructed entirely of Monel, which makes it much more compact, one-third the weight of cast types and extremely resistant to corrosion.

Also shown were CQR anchors, built by Maxim and of the time-tested "plow" design proven effective in British Naval war operations. They are made in light weight non-fouling models from 10 to 50 lbs. (for up to 100 ft. craft) and in heavy duty sizes from 90 to 5575 lbs. They are designed to set quickly, hold well and break out easily, and have a weight advantage for easier handling and stowing.

Another product shown was the fully insulated, corrosion resistant Maxim Monel marine stove, which is of compact design, weighing only 110 lbs., and being 21" long, 15" deep and 18½" high.

Bendix Depth Recorders on Display

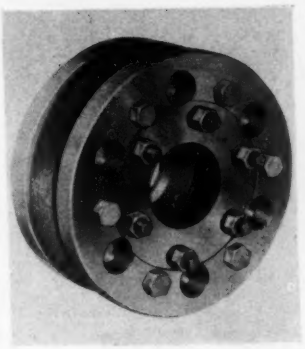
Pacific Division of Bendix Aviation Corp. displayed two models of the Bendix depth recorder, the DR-5 for registering depths of 200 ft. to 200 fathoms and the DR-9 for use in waters up to 200 ft.

The Company announces that owners of the Bendix DR-7, 100-fathom model who want to get better detail in shallow water fishing, now can have the recording panel of their machines replaced with a DR-9 panel at moderate cost.

Twin Disc Has New Flexible Coupling

Twin Disc Clutch Co. has developed a new flexible coupling that is claimed to reduce power breakdowns due to hull distortion, and lengthen the life of marine propulsion machinery.

The new coupling consists of two steel plates separated by a semiflexible disc built up from multiple layers of high-grade leather, bonded together. Each steel member drives into the waterproofed leather disc by means of a series of alternately-spaced bolts. Capable of taking full propeller thrust, the coupling eliminates a metal to metal drive in addition to providing a flexible link between the marine gear and propeller shaft.



Twin Disc flexible coupling.

The flexibility, obtained through the inherent "give" in leather, is applied primarily to the correction of angular misalignment troubles, but also counteracts the result of radial, or off-set misalignment. By reducing "shaft whip", the unit affords a decided reduction in vibration.

Installation of the coupling is simple and inexpensive. One end of the coupling bolts directly to the output flange of the marine gear, and the other end to the existing propeller shaft mating flanges.

Palmer Lists Several Improvements

The Palmer Bros. Engine Corp. displayed its line of gasoline and Diesel marine engines, ranging from 6 to 125 hp. The Palmer Model HH, two-cylinder engine, has been redesigned and improved. It is now a medium duty engine, developing 7 hp. at 1200 rpm. The model ZR series, especially adapted to fishing boats, is continued in the heavy duty line. Made in 1-2-3 and 4-cylinder models, these engines develop 7-18-30 and 40 hp. respectively at 800 rpm.

Palmer's high speed series consists of three basic models, the four-cylinder engine, PH45 and two six-cylinder engines, PH75 and PH120, available with choice of compression ratio, and various reduction gear ratios in standard or opposite rotation.

Another feature of the Palmer exhibit was the Palmer RND-6 cylinder Diesel, 100% marine engine and the Palmer RND-1 cylinder Diesel stationary. Palmer marine Diesels of 40 to 60 hp. at 1200 rpm. have been improved by the side-mounting of individual fuel pumps and re-arrangement of the exterior piping for greater efficiency and accessibility.

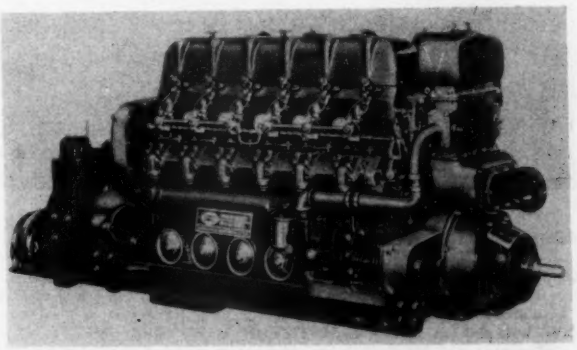
Esso Has Information Lounge

An information lounge staffed by marine lubrication and equipment specialists, and cruising guides to furnish travel information, maps and waterways routings were featured in the Esso Standard Oil Co. exhibit.

A full line of Esso and Atlas marine products was displayed. The booth was designed to provide an atmosphere in which maximum attention could be given spectators' inquiries regarding all phases of marine travel.

Harnischfeger P&H Light-Weight Diesels

The Harnischfeger Corp. display featured its new light-weight Model 687-CM six-cylinder P&H marine Diesel. Rated



Model 687-CM, 6-cylinder, 138 hp. P&H Diesel.

The Nyanza's Bonanza—

Another

Cummins Success Story

The new Cummins-Powered seiner *Nyanza*, owned and skippered by Capt. Manville Davis, Monhegan, Maine, joined the mackerel fleet last summer. Already the 275 hp Cummins Diesel has proved itself in heavy-duty, sea-going work. For example, on her first sea run from Portland to Gloucester the 60-foot *Nyanza* averaged 11 knots. And on one of her first trips out she handled a 40,000-pound load of mackerel: truly a bonanza!

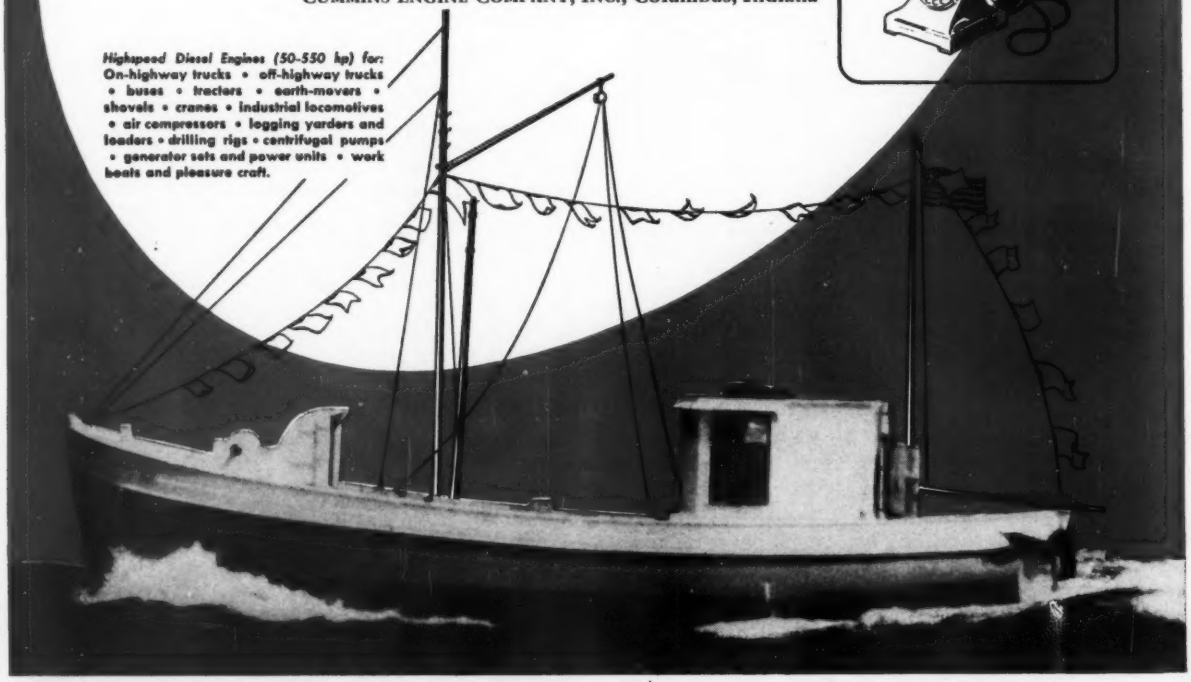
Cummins-Powered boats are among the first out when the fish are running, and among the first back when the prices are highest. That's why you find so many Cummins Diesels in every fishing fleet. Ask your Cummins Dealer for details of how Cummins Diesels can improve performance and cut operating costs on your job.

CUMMINS ENGINE COMPANY, INC., Columbus, Indiana

Service

One of the more than 200 Cummins Dealers is as close as your phone!

Highspeed Diesel Engines (50-550 hp) for: On-highway trucks • off-highway trucks • buses • tractors • earth-movers • shovels • cranes • industrial locomotives • air compressors • logging yarders and loaders • drilling rigs • centrifugal pumps • generator sets and power units • work boats and pleasure craft.



SEE YOUR CUMMINS DEALER

CUMMINS DIESEL ENGINES OF NEW ENGLAND, INC......37 Airport Road, Hartford 5, Connecticut, Tel. 2-9311
Branch: 18 Hurley St., Cambridge 41, Mass., Tel. Kirkland 1276. *Authorized Sales & Service:* Southwest Boat Corporation, Southwest Harbor, Maine

CUMMINS DIESEL ENGINES, INC......209-13 N. 22nd St., Philadelphia 3, Pa., Tel. RI. 6-4460
Branches: 2nd and Orange Sts., Mount Carmel, Pa., Tel. 1261; 6501 Hamilton Ave., Pittsburgh 6, Pa., Tel. Montrose 9784; Light and York Sts., Baltimore, Maryland, Tel. South 1281

CUMMINS DIESEL SALES & SERVICE OF NEW YORK, INC......1030-1044 Leggett Ave., New York 55, New York, Tel. Cypress 2-4500
Branches: 276-278 Badger Ave., Newark, N. J.; 16 Watervliet Ave., Albany, N. Y.; Big Tree Road and McKinley Parkway, P. O. Box 516, Blasdell, N. Y.; 3565 Erie Blvd. E., Syracuse, N. Y.

138 continuous horsepower at 1400 rpm., the 4 cycle engine has 4½" bore, 5½" stroke, displacement of 522 cu. in. and compression ratio of 16 to 1.

Among the advantages of the new unit are compactness, low weight per horsepower, and ease of servicing. Aluminum alloy is used extensively in the construction of the engine and the patented P&H cylinder head and liner assembly, is interchangeable as a unit.

These engines are available with a variety of reverse and reduction gears, both manually and hydraulically controlled, and optional front power take-off.

Sudbury Product Prevents Rust in Engines

A chemical which prevents the formation of rust and corrosion in the water jackets and manifolds of marine engines that are used either in fresh or salt water, was demonstrated by Sudbury Laboratory. The new product is the crystal form of the chemical Aqua-Clear, used for preventing rust in drinking water tanks.

The crystals are placed in a filtering device installed in the intake line of the marine engine cooling system. As the chemical crystals slowly dissolve, the chemical is carried into the water jackets and manifold where it is deposited in a microscopic film on any metal it touches. In a short time, the whole inside surface of the water jackets is completely covered with the film which is air and water tight so that further rust and corrosion is halted. However, the film is so very thin that it does not interfere with the heat transfer from the metal water jackets to the cooling water.

The filter may be installed between the water pump and the seacock or between the water pump and the engine. Installation is simple, with no special piping, no holes through the hull, no extra pumps to drive and no radiators to leak. In many respects, even better results are obtained than when a fresh water closed cooling system is used.

Kermath Engines Improved

The extensive line of gasoline and Diesel engines produced by Kermath Mfg. Co., ranging from 5 to 1000 hp., has a number of improvements in 1950 models.

In the Kermath Diesel group, the small 8-27 hp. model is available with energized hand starting. Model 4-226 can be obtained with oil cooler, rubber water pumps and fresh water cooling. Model 6-298 has new oil cooler and improved induction system as well as fresh water cooling. An improved fresh water system is used on Model 6-474, and hydraulically operated reverse gears are furnished for Model 6-895.

Among gasoline models, the 4-cylinder, 61 hp. Sea Jeep now is furnished with power take-off and improved carburetion. The 95, 120 and 150 hp. 6-cylinder models have new rubber impeller, self-priming water pumps and thermostatic water temperature control and new generators. Single and dual distributor or magneto ignition and clutch power take-offs are available.

Hudson American Radiotelephones Redesigned

Hudson American Corp. announced several new features in its line of marine radiotelephones ranging from 10 to 100 watts. The Privateer and Corsair models have been redesigned to include a standard broadcast band. The new 10 watt Privateer II is also equipped with an improved push-button microphone which simplifies the telephone to a one-hand operation, eliminating a former "talk" button.

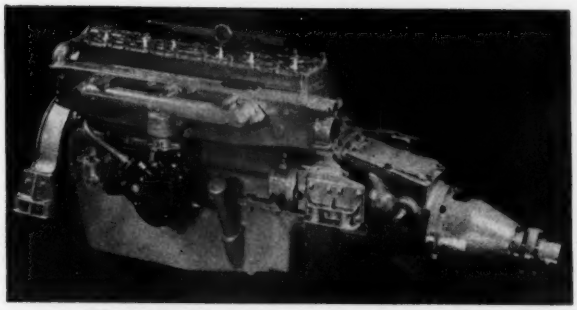
Hudson American has developed a new 35-watt radiotelephone, the Seafarer II, which will take the place of its 18-watt prototype.

No changes have been made in Hudson's larger 6 channel models, the 40-watt Mariner, the 50-watt Viking I, the 80-watt Master Mariner and the 100-watt Viking II.

Chris-Craft Offers Reduction Gear Models

The 1950 line of Chris-Craft engines, designed specially for marine use was offered in eight different power units, ranging from 60 to 160 hp. Outstanding in the new line are the various reduction drives, adaptable to single or twin engines.

Chris-Craft features centralized suspension mounts with tension rubber cushions for quiet performance; pre-heated water by exhaust manifold for the cooling system, keeping the engine at best operating temperature and insuring good lubrication; and non-drip carburetors for added safety.



160 hp. Model WR Chris-Craft marine engine.

The 60 hp., 4-cylinder, Model B engine has a cubic inch displacement of 132.7 with a 3¼" x 4" bore and stroke. Maximum horsepower is developed at 3200 rpm. and total weight in direct drive is 456 lbs. A new 3:1 reduction drive has been developed for this model, which also can be fitted with 2:1 reduction.

The Model K, 95 hp. series is of the 6-cylinder, L-head type and features seven-bearing crankshaft, oil coolers and hand-priming fuel pumps. The 130 hp. Model M also is a 6-cylinder engine with a cubic inch displacement of 320.4 and 4" bore with 4½" stroke. Maximum horsepower is developed at 3000 rpm. Both models are available with 1.5:1 or 2.03:1 reduction drives.

For boat owners requiring extra heavy-duty power, Chris-Craft offers the 160 hp., Model W. This engine is a 6-cylinder, L-head type and develops maximum horsepower at 3000 rpm. with a 4¼" bore and 4¾" stroke. The cubic inch displacement is 404.3, and a reduction drive of 2.54:1 is available.

Federal Equi-Poise Propellers

The Federal propeller exhibit contained a 48" wheel of the Equi-Poise line, which is made in various sizes from 10" to 60" in diameter. Also shown was a new type design, heavy duty, 2 blade weedless propeller. Having a rugged blade section, this model has the advantage of the weedless feature as well as being an efficient wheel.

Jabsco Clutch Control Units for Pumps

A new throw-out clutch designed to simplify the installation and driving hook-up of Jabsco marine pumps was shown by the Jabsco Pump Co. Developed to be used with Jabsco's ball bearing rubber impeller pumps, this simple, compact clutch mechanism will allow the pump to be engaged or disengaged at the throw of a small control handle.

Action of the clutch is smooth and positive, using a ball lock, V-belt mechanism which is attached to and supported by the pump shaft. The control linkage mounts on the housing of the Jabsco pump, requiring only a single bolt fastening. When the clutch control handle is thrown to "in" position, the ball lock action engages the V-belt and quickly applies power to the pump drive shaft. In "out" position, the belt slackens and idles on the outer race of a ball bearing.

Since the clutch attaches directly to the pump shaft, need for an additional shaft or outboard bearing is eliminated. Likewise, mounting as it does on the pump housing, the control linkage may be mounted at any point on a full 360° periphery. This eliminates separate base plate, shaft, and outboard bearing.

New Coperoyd Sealer and Primer

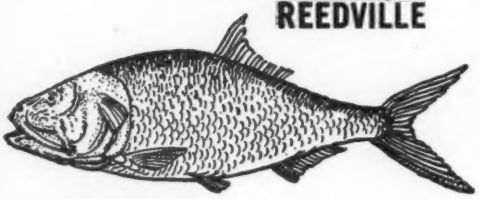
Metallic Coatings Corp. featured Coperoyd protective boat bottom coating. Composed of micro-fine metallic copper (over 8 lbs. to the gallon) chemically combined with a special liquid carrier of suitable specific gravity and reactive properties, it forms a durable coating which is an effective antifouling agent and electrolytically inactive.

New products for use with Coperoyd are Coperoyd Sealer and Coperoyd Primer. The sealer is for sealing the pores of close grain lumber and plywood to keep the grain from raising and to give better adhesion. It is a transparent liquid over which any other finish as well as Coperoyd can be applied.

The primer is an effective anti-corrosive rust inhibitive primer for use on steel or iron hulls and rudders, especially where Coperoyd is to be used as the final anti-fouling finish.

Best place for MENHADEN?

Some Say **REEDVILLE**



Some Say **BEAUFORT**

BUT

ALL SAY NEW BEDFORD FOR DEPENDABLE ROPE

Ask ten fishermen where menhaden run best and you'll get ten different answers. But when it comes to the best rope, the answer is always the same . . . NEW BEDFORD.

Over a century of "know-how" goes into the making of NEW BEDFORD rope. This knowledge, plus modern manufacturing methods assures you of the finest quality rope money can buy. Naturally strong and flexible, NEW BEDFORD is lubricated throughout to give you long, reliable service.

FOR LOBSTERMEN there's NEW BEDFORD "Copper Clad" Pot Warp, specially treated to kill destructive marine bacteria; NEW BEDFORD "Green Clad" Nylon Heading Twine that stays green, stays strong even after long periods of immersion.

Whatever your rope requirements . . . running lines, rigging, mooring, purse lines, tow lines, net rope, pot warp or heading twine, your NEW BEDFORD dealer can supply you with the best.

Other NEW BEDFORD Fishing Lines

• FISHERMAN'S CABLE • PURSE LINE
• MANILA NET ROPE

NEW BEDFORD PURE MANILA

NEW BEDFORD CORDAGE COMPANY

233 Broadway, New York 7, N.Y.

5398

New Bedford Producers Now Headed by Capt. Matland

The Seafood Producers Association recently elected Capt. Rudolph B. Matland of Fairhaven as president, succeeding William J. Collis. Matland is owner and skipper of the dragger *Joan and Ursula*.

Other officers elected at the annual meeting of the Association were John G. Murley, vice-president; John R. Hillier, treasurer; and John A. Murley, secretary.

Representing scallopers on the board of directors during 1950 will be Oscar Helgeland, Josef Isaksen, Magnue Thompson, Isaac C. Norton and Warren W. Vincent.

Olaf Anderson, Michael Smith, Hans Haram, John J. Gobell and Herman R. Saunders will represent large draggers on the board, while inshore draggers will be represented by William J. Collis, Mathias Bendicksen, Arne Pedersen, Tharald Drivdahl and Daniel F. Mullins.

Suit Filed in Sea Collision

Celia Borden and Andrew Malone of Portsmouth, R. I., owners of the fishing vessel *Marmax*, recently filed a suit in Federal Court against the Netherlands-America Steam Navigation Co. and the Holland-America Line, owners and operators of the S.S. *Nieuw Amsterdam*, a passenger liner.

It is alleged the *Nieuw Amsterdam* was responsible for a collision with the *Marmax* on June 28, 1949. The *Marmax* had left New Bedford for the fishing grounds off Nantucket the day before. The *Nieuw Amsterdam* was bound for New York from Europe.

It is alleged the *Marmax* encountered a thick fog and sounded fog signals, but that the *Nieuw Amsterdam* emerged from the fog without sounding any signals and struck the *Marmax* in a sidewise manner. After the collision, the *Marmax* was able to proceed to New Bedford without assistance and the *Nieuw Amsterdam* continued to New York.

Damages of $50,000 with interest and costs are sought by the owners of the *Marmax*. They charge that the *Nieuw Amsterdam* was traveling at an excessive rate of speed.

"Venture I" Changes Hands

Gerald J. Moriarty and Ernest Clattenburg of New Bedford have purchased the 66′ dragger *Venture I*, which is being repowered at Bridgeport, Conn. with a 240 hp., 600 rpm., 8½ x 10½ Wolverine Diesel.

Wellfleet Opens New Quahog Area

Wellfleet residents are allowed 4 bushels of quahogs a week, under a commercial permit, at the newly-opened quahog bed off Egg Island in Wellfleet Harbor, according to chairman of Selectmen Charles E. Frazier, Jr. This is the first time the area has been opened, and the quahogs must be dug by hand.

The Town has planted some 500 bushels of quahogs in the area during the last two years, the Selectman said, and, with proper growth of the shellfish, a yield of at least 2,000 bushels is expected.

Falmouth Shellfishermen's Association Formed

A large group of Falmouth commercial shellfishermen and others interested in shellfishing organized the Falmouth Shellfishermen's Association at a general meeting December 12.

Jesse Costa of Waquoit was elected president of the organization. Other officers elected included Manuel Teixeira, secretary; and Jesse Torres, Jr., treasurer. A shellfish committee elected included Gordon Burgess, Jesse Costa, Armando Costa, Arthur Winn and the Messers. Teixeira and Costa.

Areas Where Fishing Boats Sank Cleared

Two areas off the Massachusetts coast where fishing craft sank recently are now cleared and safe for navigation, according to a notice to mariners issued by the Coast Guard.

Army Engineers surveyed the area in Buzzards Bay where the *Fanny Parnell* sank recently and found it all clear, to a depth of 40′ at mean low water. Some distance away, also in Buzzards

Bay, where the *Sister Alice* went down a few weeks ago, about 2,000 yards from Butler Flats Light, is also clear.

Big Scallop Catch at Provincetown

A large catch of shucked sea scallops was landed on Town Wharf at Provincetown the week of December 19 when the New Bedford scallop dragger *Liboria C.* unloaded 5,877 lbs. after 48 hours of fishing off Race Point.

Skippered by Capt. Manuel DeMello, the scalloper landed the big catch at Baxter's on Town Wharf, which handled the shellfish for the Washington Square Fish Co. of New Bedford.

December 18 was a busy day at Provincetown, with more than 61,000 lbs. of groundfish landed at Monument Dock, in addition to approximately 30 tons of trash fish.

More than 30 Provincetown residents had applied for commercial quahog permits up to December 12, when the flats were opened to commercial shellfishing for the first time in many years.

Mass. Committee To Promote Fisheries

Two steps to assure the continued health of the $150,000,000 Massachusetts fisheries were approved by Governor Dever's newly-appointed committee to promote Massachusetts fisheries at the first meeting of the group on December 30.

The committee voted to seek Federal action to: (1) Encourage other nations to sign the Northwest Atlantic Fisheries Convention to halt the depletion of fish in that area. (2) Grant sufficient funds to the U. S. Fish & Wildlife Service for an additional experimental vessel to study the advisability of quick-freezing fish at sea with the resultant increase in the number of products which can be obtained from the basic fish.

The committee, headed by Francis W. Sargent, director of the State Division of Marine Fisheries, was appointed by the Governor on December 22.

The fisheries convention was ratified by the U. S. Senate this year, but steps to implement the agreement and ratification by other nations among the nine countries involved have not yet been taken.

New methods of bringing fish to market, members of the committee said, would increase the number of products which are now wasted by processing at sea. Among the products which could be obtained are oil from fish livers.

Members of the committee are: Thomas A. Fulham, president, Federated Fishing Boats of New England and New York, Inc.; Thomas D. Rice, executive secretary of the Massachusetts Fisheries Association; John Del Torchio, director, Cape Ann Fisheries, Gloucester; Patrick McHugh, secretary-treasurer, Atlantic Fishermen's Union; John Donegan, president, Seafood Workers' Union; Commissioner John J. DelMonte of the State Department of Labor and Industries; Alphonse J. Graffeo of the Graffeo Oil Co., Boston; and Joseph A. White of the Gloucester Seafood Workers' Union.

The British Columbia Provincial Police "P. M. L. 16" is powered by a Vivian Marine Diesel, 6 cylinder 6¾" x 10", 120 horsepower engine with S-N 3766 Reverse Gear with 2065-5 Reduction Gear.

Geared for CATCHING!

Whether you're catching criminals or fish, S-N Gears get you there and back ...without breakdowns...*without lost time!*

For the same reason that J. F. McNaught, Chief Mechanical Supervisor, B. C. Provincial Police said, "... Snow-Nabstedt Gears are fulfilling all our expectation as to *performance*," you, too, will find complete satisfaction with S-N Gears.

For dependability, be sure to specify S-N Gears.

MAKERS OF JOE'S FAMOUS GEARS

4 H. P. to 1,000 H. P.

Write for Literature

THE SNOW-NABSTEDT GEAR CORP. REVERSE & REDUCTION S-N GEARS HAMDEN, CONN., U.S.A.

The SNOW-NABSTEDT GEAR CORP.

P. O. BOX 1753, NEW HAVEN, CONN., U. S. A.

S-N *Distributors*

Mechanical Equip. Co. *New Orleans*	Oswald Machine Co. *San Francisco*	Pacific Marine Engine Co. *Seattle*
Diesel Marine Engineers *Jacksonville*	Star Marine Engine Co. *Oakland*	Simplex Engine Co. *Vancouver, B. C.*
Crofton Diesel Engine Co. *San Diego, San Pedro*	Oregon Marine Supply Co. *Portland*	W. L. Masters & Son, Inc. *Chicago*

The "High Liners" must have efficient, dependable equipment

52" and LARGER

Where lives as well as profits are at stake both owners and skippers realize the necessity of using propellers of proven quality. That is why you will find Hyde Propellers on the "high liners" of the fishing fleet. Let the experience of the men who know be your guide—specify Hyde.

HYDE
PROPELLERS

EFFICIENT . . . RELIABLE
ALWAYS GET HOME SAFELY

HYDE WINDLASS COMPANY, Bath, Maine

Now Fishermen can get
PIN-POINT *accuracy*
...WITH THE *Exclusive*
BLUDWORTH "NULDIKATOR"*

BLUDWORTH MARINE
92 Gold St., New York 7, N. Y.
Please send me, without obligation, detailed data on the Marine Arrow.
Name _____
Address _____
_____

*TRADE MARK

Gloucester Has 30 Draggers Fishing in South

Approximately 30 Gloucester draggers are now fishing out of New York and Virginian ports for the Winter months. Among them is the dragger *Magellan*, Capt. Edward Silva, which lands her trips at Fulton Market, N. Y. On December 15, she brought in a 71,000-lb. trip, which included 61,000 lbs. of scup and was the best catch landed by a Gloucester craft at Fulton Market this season.

Other good trips landed at Fulton Market include a 55,000-lb. fare brought to port December 20 by the *Edith L. Boudreau*, Capt. Dave Ribeiro. Scup accounted for 50,000 lbs.

Capt. Albino M. Pereira and crew in the dragger *Sol*, formerly the *Portugal*, weighed out 52,000 lbs. at Fulton Market December 13. The fare included 37,000 lbs. of scup and 9,000 lbs. of butterfish, besides some bluefish, fluke, sea bass, squid, lobsters and sea scallops.

Big Day's Landings

Gloucester had landings of 2,199,500 lbs. of fish on December 19, which is a large amount for that time of year. The catch was landed by a fleet of 19 boats, and over two million lbs. of it was redfish, which sold for 5c a pound.

The biggest trip was landed by the *Mary & Josephine*, which brought in 230,000 lbs. Tied for second position were the *Curlew* and the *Killarney*, each of which landed 180,000 lbs.

Capt. Eric A. Carlson

Capt. Eric A. Carlson of Gloucester, high-line skipper in the Gloucester and Boston fisheries for a score of years, passed away January 2 at the age of 55 years. He came to Gloucester at the age of 14 and from that time followed the sea from Gloucester and Boston in the market fisheries, in dory halibuting and in dragging and trawling. His commands included the *Henry Ford*, the *William L. Putnam*, and the *Golden Eagle*, all out of Gloucester, and the trawlers *Dartmouth* and *Drift* out of Boston.

During the war he was in command of the USS *Captor*, which was engaged in anti-submarine warfare in the Atlantic. The craft had been converted from the Boston trawler *Wave*.

Capt. Percy Pieroway

Capt. Percy Pieroway, who for many years was in command of the dragger *Emma Marie*, died recently. Capt. Pieroway was also a high-line swordfisherman and a leading mackerel netter.

Harrington Heads Fisheries Association

Newly elected officers of the Gloucester Fisheries Association are as follows: president, Thomas E. Harrington, Fabet Corp.; vice-presidents, David A. Doren, Trident Fisheries, Inc., and Frank Cefalo of North Atlantic Fish Co.; treasurer, Robert A. Merchant of General Seafoods Corp.; assistant treasurer, Frank Favalora, Harbor Cove Fisheries, Inc.; and secretary, Lawrence J. Hart. Retiring president is John DelTorchio of Cape Ann Fisheries.

Westerbeke Has New Wire Rope Line

Westerbeke Fishing Gear Co. of Boston and Gloucester has been appointed New England distributor of J & L wire fishing rope, made by Jones & Laughlin Steel Corp. of Pittsburgh.

Would Impound Lobster Boats for Violations

Boats and equipment used in taking lobsters in violation of the law could be impounded by the State Division of Marine Fisheries for one year, under a bill filed December 7 in the State Legislature by the Atlantic Lobstermen's Corp. and the South Shore Lobstermen's Association.

The bill provides that all traps, trawls, pots, buoys, lines, boats, or other fishing gear used in violation of the laws pertaining to lobsters, may be impounded by the Division of Marine Fisheries upon a finding of guilty either by a court or the director of the Division after a hearing.

All lobsters imported from Canada and sold in Massachusetts would have to be stamped with the word "Canada" under another section. The Division would be directed to purchase two patrol boats for $30,000 and employ up to 30 coastal wardens and boatmen under another bill filed by the same two groups.

The Sign of Good Equipment and Good Service

SOLD BY
PERKINS-EATON MACHINERY CO.
PEMCO
376 DORCHESTER AVE. BOSTON
394 LIBERTY ST. SPRINGFIELD
MASSACHUSETTS

IT stands for an organization long experienced in the sales and servicing of the best in Marine Engines—

CATERPILLAR DIESELS
UNIVERSAL GASOLINE ENGINES

Our Sales, Parts, and Service Departments are all committed to the principle that the worth of the product it sells depends upon the service given by the seller. You can rely on PEMCO.

PERKINS-EATON
MACHINERY CO.
376 DORCHESTER AVE. BOSTON 27, MASS. TEL. SOUTH BOSTON 8-4660

Maryland Cooperative to Lease Oyster Beds from State

What may prove to be a gradual swing from public planting to private leasing and planting of the oyster producing bottoms of the State is seen by some authorities in the recent forming of a cooperative by citizens of Smith's Island, for the purpose of leasing and developing several thousand acres of oyster bottoms.

For some months residents of the Island have been asking for permission to take oysters with handscrapes. Recently a delegation of Island men met with members of the Tidewater Fisheries Department in Annapolis, to renew their plea. They were told definitely that handscraping would not be permitted, and that the law against it would be enforced.

At the same time, the suggestion was advanced that the Island oystermen form a cooperative and lease certain oyster producing bottoms from the State, particularly bottoms adjacent to Smith's Island in both Tangier Sound and Chesapeake Bay.

The Smith's Island Cooperative now has about 150 members. So far, application has been made for leasing 2,000 acres, 1,500 of which are in Tangier Sound and 500 in Chesapeake Bay. It is expected that the Cooperative will purchase seed oysters from the State next year to add to the present supply.

The Cooperative marks the first real break by tongers and dredgers from public ownership and use of the oyster producing areas of the State.

Oyster Production

With exceptions in some areas, the trend in Maryland's oyster production is slightly downward this season as compared with 1948. However, last year under unusually good weather conditions, the oyster take ran above the normal of recent years.

The oyster yield during September-November, 1949, inclusive, was 900,250 bushels, as compared with 1,033,802 bushels last year, or a decrease of some 133,552 bushels in the current season. Oyster imports during the Fall season totalled 169,823 bushels, as compared with 131,820 bushels last year, an increase of stock shipped into Maryland of some 38,003 bushels.

An interesting sidelight on the oyster production situation is the fact that more boats and men are being employed in the operations than has been the case recently. Among those regions that are producing at a lower level this year are Tangier Sound, the Choptank River and the Bay proper.

Propose Resurvey of Oyster Beds

A resurvey of the public oyster beds of Maryland has been proposed by the Department of Research and Education in order to clarify their boundaries and to define their areas. Funds for this work were included in the budget request of the Department for 1950.

It is estimated that three years will be required to complete the survey in question. The last survey of this nature was made nearly fifty years ago.

Eastern Bay, Swan Point Oyster Studies

New scientific studies of oysters in Eastern Bay and at Swan Point in Chesapeake Bay emphasize the slim chance a baby oyster has of attaining maturity. Investigations of the Fish and Wildlife Service show that in Eastern Bay last Summer only five oyster larvae out of a thousand lived long enough to attach themselves to a smooth object and become "spat". At Swan Point, thirteen out of a thousand survived the so-called free swimming stage of an oyster's life.

The report, made by the Service's Chesapeake Shellfish Investigations at Annapolis, noted that heat and dryness were possible factors causing some changes in the waters of Eastern Bay. It was apparent that the waters of the Bay did not receive enough nutrient salts to produce the baby oysters' formula, which is phytoplankton, an even smaller form of marine life. The same dryness apparently contributed to the fact that adult oysters in Eastern Bay were in poor condition during the Summer.

Setting of oysters in Eastern Bay varied from an average of one spat per shell to three and a half per shell. At Swan Point setting varied from one per shell to one and three tenths.

Study of the setting of oysters in the different localities is of help to the State in planning its oyster-growing program. When the State knows the experience of setting in particular points, it is in a better position to make decisions as to seed planting.

Equipment and Supply Trade News

Additional information, and copies of catalogs and booklets mentioned, may be obtained on request from the addresses listed in the items or by writing Atlantic Fisherman, Goffstown, N. H.

New Roebling Sleeve Splice

A new Tapered Sleeve Splice, developed by John A. Roebling's Sons Company, Trenton 2, N. J., eliminates the bothersome necessity of sling users splicing their own sling loops, and at less than what it costs them to do it.

The rolled loop and single tapered sleeve provide greater flexibility and compactness, developing full catalog strength of the rugged Preformed "Blue Center" steel wire rope sling. A folder describing the new product is available on request.

Westinghouse Expands Controls Division

Westinghouse Air Brake Company, Wilmerding, Pa., has formed an Industrial Products Division, to give increased attention to the development, promotion and marketing of the Company's air compressors and pneumatic controls. These products include Tridyne marine clutch and throttle controls.

The new division will comprise three sections—a field sales organization, a headquarters sales organization and a headquarters engineering organization. Appointed to direct activities of the new division are three men from the Air Brake organization who have long specialized in this field: A. J. Bent, Field Sales Manager; J. P. Cooper, Headquarters Sales Manager; and R. R. Stevens, Industrial Engineering Manager.

Marine Products Bait Tank Pump

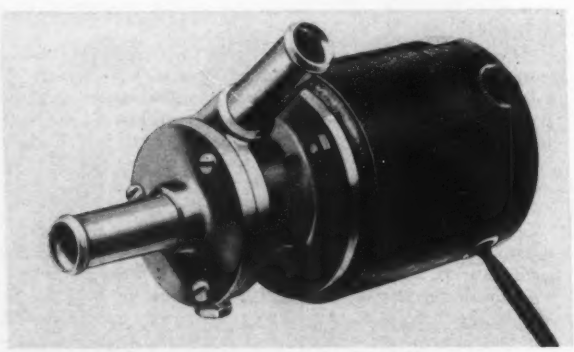
The 1950 line of pumps made by Marine Products Company, 515 Lycaste St., Detroit 14, is said to represent one of the most complete and advanced lines on the market. Every pump has been engineered since the war by men who have spent a lifetime in the marine field.

The most recent additions are a series of small, compact, electric motorized bait tank pumps in 6, 12, 32 and 110 volts DC and AC, and a complete line of heavy duty, all bronze, Twin Disc clutch, belt-driven centrifugal pumps.

The new MP line of "Engine Cooling Pumps" is available in 10 models for all engines up to 200 hp., in pipe sizes from ¼", ⅜", ½", ¾" and 1". These pumps feature the revolutionary Dupont Neoprene impeller, sole moving part, which it is claimed withstands almost unlimited wear, even when pumping sand and silt.

Marine Products Company also makes a complete line of bilge pumps. These include more than 30 models, in all sizes and rotations, with many reversible and clutch driven models in standard and extra heavy duty models. They are equipped with an all-bronze, non-clogging impeller, which handles not only a large volume of water, but semi-solids and small debris as well.

Marine Products pumps are standard equipment on several of the leading makes of marine engines, and the line includes replacement models for nearly every size and model of marine engine.



New Marine Products electric bait tank pump.

Broz Joins Nordberg Diesel Dept.

Jos. G. Broz

Jos. G. Broz has been appointed as sales manager of the Four Cycle Diesel Engine Dept. Nordberg Manufacturing Co., Milwaukee 7, Wis.

Mr. Broz was vice-president in charge of sales of Busch-Sulzer Diesel Engine Company of St. Louis, Mo. at the time that Company was purchased by Nordberg in 1946. Until his present appointment Broz was surveying South American market potentialities and establishing field sales and service organizations there for Nordberg.

Prior to his association with Busch-Sulzer, Broz was with Baldwin Locomotive Works from 1930 to 1944. H. M. Cahill will assist Broz in directing the sales activities of Nordberg's Four Cycle Diesel Engine Dept.

New Synthetic Boat Caulk

A new type synthetic rubber caulking material, especially designed for sealing wooden boat seams, is being marketed by Pioneer Chemical & Mfg. Co., 1833 Columbus Road, Cleveland 13, Ohio.

The new product is extruded in standard 30" lengths, in either 3/16" or ¼" diameters, and is virtually unaffected by extreme temperatures and outdoor weathering. The unusual compound of its rubber base remains pliable and elastic indefinitely.

Extremely adhesive, this new deck and plank bottom sealer sets and cures itself through chemical action. It does not dry through the evaporation of a solvent, nor does it have to be melted and poured into place. Very elastic, the handy extruded strips can easily be stretched to the desired length or diameter and applied with a putty knife or a man's thumb. It has outstanding resistance to gasoline and oil.

Paulsen-Webber to Expand Coverage

Special emphasis on the fishing industry is planned for the coming year by Paulsen-Webber Cordage Corp., 170 John St., New York 7, N. Y., including a major expansion of its activities in sales of cord, twine and cordage of small diameters.

In connection with the fishing industry, Richard J. Kehoe, sales manager, revealed plans for a distribution program which will serve the industry from Maine to Mexico. During 1949, satisfactory results were obtained from a special shrimping rope developed as the result of Paulsen-Webber's experience with New England fishermen, and distribution of this product throughout the South will be increased.

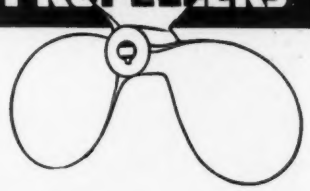
Top Oiler for Gasoline Engines

An improved Top Oiler for gasoline engines has been placed on the market by Universal Lubricating Systems, Inc. 756 Allegheny Avenue, Oakmont, Pa. The new unit is equipped with an outlet needle valve which makes possible the adjustment of the correct air-oil flow for any make of engine.

The Universal Top Oiler No. 3000 is a metering device which distributes top oil evenly to all cylinders in a gasoline engine and overcomes the uncertainty of top cylinder lubrication when top oil is introduced in the fuel tank. It helps correct excessive piston, ring and cylinder wear, sticky valves, carbon and gum formation, poor pick-up, and high crank-case consumption. It

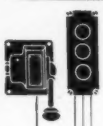
THERE'S MORE "TAKE-HOME" PAY with

MICHIGAN
MACHINED-PITCH
PROPELLERS



Less to deduct for fuel, less time lost in making port, less wear and tear from vibration . . . for, the perfect accuracy of Michigan's Machined-Pitch method of manufacture and their scientifically proven design make them fast, smooth as silk in operation . . . converting every bit of engine power into effective thrust. Next time you need a propeller try a Michigan. You'll be amazed at the finer performance you get and the added length of service afforded by its highly corrosion-resistant MICHALLOY Metal.

MICHIGAN WHEEL COMPANY, GRAND RAPIDS 3, MICH.



"TRIDYNE"

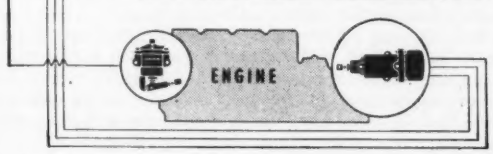
for positive, precise

CLUTCH and THROTTLE CONTROL

A finger-touch positions the lever for speed . . . a push of a button shifts the clutch. Air pressure does all the work in "TRIDYNE" power controls for small vessels. It is power control equipment stripped to essential elements. Gives small boat operators the same accurate, dependable command used by larger vessels in coastal, harbor and inland waters. Easy installation—all connections are ⅜" copper tubing. Ask for Bulletin IDA 9471-5.

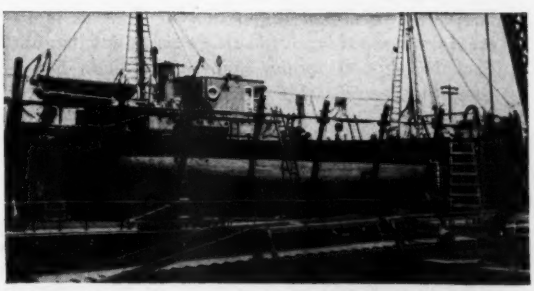
Westinghouse Air Brake Co.

INDUSTRIAL DIVISION—WILMERDING, PA.



Trawler Repairs

in the Port of Boston



Bethlehem's two repair yards in Boston harbor, the Atlantic Yard and Simpson Yard, have unexcelled facilities for repairing, reconditioning and servicing trawlers efficiently and economically. The next time you need trawler repairs get in touch with Bethlehem.

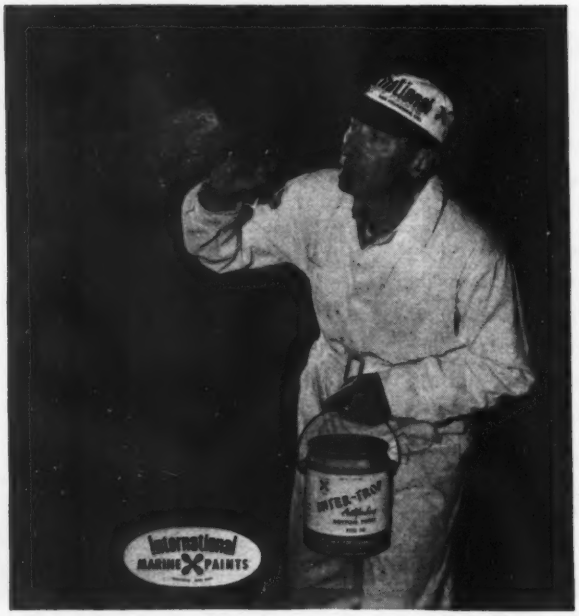
BETHLEHEM STEEL COMPANY

Shipbuilding Division

ATLANTIC YARD
80 Border Street, East Boston 28

SIMPSON YARD
256 East Marginal Street, East Boston 28

Telephone: East Boston 4000



The Paint That Saves You Fuel

INTERNATIONAL BOTTOM PAINTS do keep bottoms clean. They are therefore, bound to save on fuel bills. You as a boatman know that an ordinary coating of barnacles and grass can increase fuel consumption 10% or more. Furthermore, INTERNATIONAL Bottom Paints are lasting. They offer protection to the bottom and retain their antifouling properties far longer than ordinary paints.

There are several INTERNATIONAL Bottoms made to meet the various types of service and price limitations. Each is the outstanding paint of its kind. Send for color cards and price lists.

FOR METAL BOTTOMS

INTERNATIONAL has developed a combination of a primer and an antifouling paint that offer the maximum protection and preservation of metal bottoms. Send for the two circulars, "INTERLUX SILVER PRIMOCON" and "INTERNATIONAL INTER-TROP No. 50".

International
ANTIFOULING
BOTTOM PAINTS

International Paint Company, Inc.
New York 6, N. Y., 21 West Street
San Francisco 7, Cal., 901 Minnesota St.
New Orleans 13, La., 315 Girod Street

International Paints (Canada) Ltd.
Montreal, Quebec, 6700 Park Avenue
Vancouver, B. C., 101 Powell Street

AGENTS IN EVERY PORT

also insures immediate lubrication of top cylinders during the "cold start" or warm-up period.

The Universal Top Oiler holds the top oil in a visible container so that the oil level can be easily checked. There are no moving parts to wear out, the oiler being operated by vacuum created in the engine which draws the air-oil mixture into the carburetor through intake manifold.

"This Business of Boating"

A 310-page book entitled "This Business of Boating," written by Capt. Elwell B. Thomas of Stonington, Conn., has just been published by the Cornell Maritime Press, Cambridge, Md. It is a study of boatyards, yacht clubs, yacht basins, marine supply stores, boat operation, insurance and the many other factors concerned with boating, considered from a business standpoint. There are many drawings and photographs showing layouts of building ways, marine railways, docks, floats, pile driving equipment and all of the physical properties necessary for the small and medium-sized yard.

Valuable information is given on riparian rights, property rights, property damage, personal injury and the many accidents and casualties that can and do happen on board boats and in and around boatyards. "This Business of Boating" can be purchased for $5.00.

Grover CO-2 Pressure Horn

Two new developments in marine signaling devices have been announced by Grover Products Company, 1221 South Hope Street, Los Angeles 15, California.

The first signal is a powerful Grover pressure horn, available in a handy kit, that operates on CO-2. This is said to be the first time that CO-2 has been used as a pressure system for this purpose. By using CO-2, an air system is eliminated, resulting in an inexpensive, compact, easily installed unit.

The handy kit contains a Grover marine pressure horn, brass valve and regulator, CO-2 bottle and all necessary tubing and fittings for installation. Extra CO-2 bottles are available, and each bottle will blow the horn 1400 to 2000 times.

The second signal is an electrically operated, easily installed, cast bronze marine bell, which is available in chrome or bronze finish.

Direction Finder Attachment for Radios

A new, full-size direction-finding attachment that utilizes the receiving circuit of any radio or radio-telephone receiver, portable or stationary, is announced by the Radiaphone Company, 2435 E. Colorado, Pasadena 8, Calif.

Featuring extreme simplicity and speed of calculation, the Radiaphone direction finder can actually increase the sensitivity of the receiver. Its accurate sense characteristics easily determine the true direction of floating transmitters.

Case dimensions of this compact attachment are 9½" x 9½" x 3½"; loop diameter is 14". The Radiaphone direction finder is light in weight, with long life assured by its cast-aluminum construction. The loop is of anodized aluminum and all components are treated for dampness and salt air exposure.

Cooper-Bessemer Opens Halifax Office

The Cooper-Bessemer Corp. has opened a district office at 95 Hollis St., Halifax, Nova Scotia, which provides direct factory representation for Eastern Canada. In charge is Branch Manager J. A. MacLeod, who directs all sales and service activities. He is assisted by Spurgeon Covey, Cooper-Bessemer factory trained service engineer, and complete factory service facilities include a stock of essential engine parts.

New Atlantic Coast Navigation Charts

New editions of three charts of portions of the Atlantic coast are now available for distribution by the U. S. Coast & Geodetic Survey. The new editions are of chart 71, Gulf of Maine and Georges Bank; chart 1,000, Cape Sable to Cape Hatteras; and chart, 1,001, Cape Hatteras to Straits of Florida.

Loran curves printed on the reverse side of the charts have been revised to show loran lines of position in agreement with a plan which was put into use about December 31.

New Trawler

"WISCONSIN"

Completely Outfitted with

WESTERBEKE GEAR

The new 120' trawler *Wisconsin*, owned by Capt. John Roen of Sturgeon Bay, Wisc. and operated out of Boston with Capt. John Stimberis as skipper, is completely outfitted with Westerbeke gear.

Westerbeke furnished her with trawl nets, manila rope, wire rope, trawl doors, Wesco Cod-End Protectors and fittings.

The *Wisconsin* is one of hundreds of boats which depend on Westerbeke for the finest in fishing gear. No matter what your requirement is, for large or small boat, Westerbeke is equipped to make up the gear you need.

WESTERBEKE FISHING GEAR CO., INC.

HEADQUARTERS FOR FISHING EQUIPMENT AND MARINE HARDWARE

279 Northern Ave., Boston 10, Mass. **Branch Store and Warehouse at Gloucester**

New York Fishery Council Keeps Seafood in the News

Through its continuous activity in cooperating with newspapers, magazines and television and radio stations by furnishing them with up-to-the minute news and views of seafood production and handling, the Fishery Council keeps the story of seafood ever before the public.

Millions of people read, hear and see how seafood adds to the joy of living. As a result of this information, more and more people are influenced to indulge in the pleasure that comes from understanding the tempting ways of preparing and serving seafood, and from the realization of its unique nutritional value.

Augustus Cheever Lockwood

Augustus Cheever Lockwood, 86, died on December 12. He came to Fulton Market at the age of 16 and began work at No. 4 stand two years later. Here he stayed for 68 years. His son, Augustus Cheever Lockwood, Jr. survives him in the firm of Lockwood and Winant.

Elsworth Beats Holiday Shipment Record

The J. and J. W. Elsworth Oyster Company, of Greenport, of which Charles Woolley is manager, exceeded its last year's record for holiday shipments of oysters. The Company's special holiday packages included both opened oysters and oysters in the shell.

"Demand" Nearly Sunk

The *Demand*, in command of Captain Howard Roland, loaded with a cargo of about 600 gallons of sea scallops, came near sinking while moored at the Dock at the foot of Main St., Greenport, on Dec. 19. She docked at about seven o'clock in the evening. The crew went ashore, leaving one man on duty. During the night the vessel sprung a leak and by morning she was nearly sunk. But the motor pumper of the Standard Hose Company of the Greenport Fire Department freed the vessel of water.

Capt. Charles B. Putnam

Capt. Charles B. Putnam, for years a recognized authority on the cultivation and handling of oysters, died on December 7. Captain Putnam, who was in his 80th year, was actively identified with the oyster industry for over 60 years. In January, 1948, he resigned as manager of the New Suffolk and Greenport branches of the Radel Oyster Company, in whose employ he had been for over 40 years.

Two New Packard Distributors

Higgs Marine Service, Inc., New York, and Essex Machine Works, Inc., Essex, Conn., have been made distributors of Packard marine engines.

Higgs Marine, headed by William Higgs, has complete waterfront facilities in the Bronx, and will service the territory that includes Long Island, Staten Island, Dutchess, Ulster and Sullivan counties in New York as well as northern New Jersey and Fairfield county, Connecticut.

Essex Machine, of which Morton C. Tiley is president, will handle the State of Connecticut with the exception of Fairfield county.

Bolinders Distributing Nordberg Engines

Bolinders Company, Inc., 33 Rector Street, New York City, has been appointed distributor for Nordberg gasoline marine engines and Nordberg Model 4FS-1 Diesel engines.

Ruben Bengston is president of Bolinders Company, which was organized in New York in 1914. Prior to 1923 he was associated with Compania Bolinder in Buenos Aires, Argentina.

A. E. Cross, chief engineer of Bolinders, was vice-president and chief engineer of Rogers Diesel and Aircraft Corp. before joining Bolinders in 1943.

Jack Wallis, sales manager, served 18 years with the Royal Air Force, and after World War II was a factory representative of a British company in the U. S., joining Bolinders in 1947. H. E. Hanson, Bolinders' service manager, has been associated with the Company since 1934.

Fish Landings for Month of December

(Hailing fares. Figure after name indicates number of trips.)

NEW BEDFORD

Adventurer (4)	77,500	Liberty (4)	19,900
Agda (3)	43,400	Lt. Thomas Minor (1)	5,000
Anna C. Perry (3)	51,700	Little Joe (3)	32,100
Ann & Marie (2)	7,900	Lubenray (1)	13,700
Annie II (2)	1,500	Lucky (3)	15,400
Annie Louise (2)	14,700	Madeline (3)	21,200
Annie M. Jackson (3)	48,300	Manuel F. Roderick (1)	106,000
Arnold (3)	40,800	Marg-E (2)	11,200
Arthur L. (2)	49,600	Maria Julia (5)	56,500
Barbara (1)	17,300	Mary & Joan (3)	113,900
Barbara C. Angell (2)	83,800	Mary & Julia (2)	29,500
Barbara M. (3)	58,200	Mary Anne (3)	83,700
Bernice (1)	7,000	Mary Ellen (1)	12,300
Capt. Deebold (3)	41,300	Mary J. Hayes (2)	51,100
Carl Henry (2)	51,500	Mary M. (3)	20,000
Carol & Dennis (3)	23,800	Mildred & Myra (1)	7,800
Carole June (3)	91,400	Minnie V. (3)	28,700
Catherine T. (2)	59,000	Molly & Jane (3)	35,400
Charles E. Beckman (3)	33,400	Natale III (1)	30,000
Charlotte (1)	13,300	Noreen (2)	66,700
Christina J. (4)	51,000	North Wind (1)	4,600
Clara T. (2)	3,100	Paolina (1)	29,500
Clifton (2)	8,200	Papoose (2)	16,100
Clinton (2)	13,500	Patsy (2)	7,600
Clipper (2)	148,000	Pauline H. (2)	78,100
Connie F. (3)	28,900	Penguin (2)	43,500
Dale (3)	7,500	Phyllis J. (3)	26,400
Dauntless (2)	16,100	Plymouth Belle (1)	13,800
Doris Gertrude (3)	48,200	Portugal (1)	10,900
Driftwood (3)	20,100	Princess (2)	27,100
Edith (3)	35,300	Pvt. Frank Kessler (2)	13,900
Elva & Estelle (2)	26,000	Quest (2)	9,600
Elva L. Beale (4)	37,200	Reliance (1)	3,900
Etta K. (1)	10,600	Rita (4)	28,900
Eugene & Rose (2)	29,900	Rose Jarvis (2)	9,100
Eunice-Lilian (2)	49,700	Rosemarie V. (3)	36,200
Five Sisters (3)	19,000	Russell S. (3)	26,700
Frank F. Grinnell (3)	35,200	St. Ann (1)	21,000
Fred Henry (1)	8,900	Salvator (1)	7,000
Gannet (3)	127,200	Sandra & Jean (3)	26,900
Gertrude D. (2)	22,900	Sea Ranger (2)	53,500
Gladys & Mary (3)	72,700	Skilligolee (1)	22,500
Gloria F. (1)	25,100	S. M. Murtosa (1)	10,700
Grayling (1)	7,400	Solveig J. (2)	56,800
Growler (3)	59,000	Southern Cross (1)	8,200
Helen B. (3)	40,900	Stanley B. Butler (2)	87,200
Hope (3)	21,700	Susie O. Carver (3)	36,500
Invader (4)	52,800	Theresa (1)	10,900
Ivanhoe (3)	83,700	Theresa & Jean (1)	37,000
Jacintha (2)	67,200	Theresa R. (1)	7,300
Janet Elise (3)	14,000	Three Pals (4)	25,300
J. Henry Smith (3)	15,600	Two Brothers (3) (NBD)	22,300
Joan & Ursula (2)	64,100	Two Brothers (3) (R. I.)	36,800
John G. Murley (1)	40,000	Victor Johnson (3)	36,700
Johnny Ryan (1)	11,000	Viking (4) (NBD)	77,700
Josephine & Mary (2)	40,600	Wamsutta (2)	26,800
Josephine P. II (1)	6,000	Wanderer (2)	8,000
June Bride (3)	40,000	Whaler (2)	68,100
Katie D. (2)	97,500	William Chesebrough (3)	20,500
Kelbarsam (3)	30,300	Winifred M. (3)	17,900

Scallop Landings (Gallons)

Abram H. (2)	2,000	Marie & Katherine (2)	1,600
Adele K. (2)	1,400	Marmax (1)	1,050
Alice J. Hathaway (1)	900	Martha E. Murley (2)	1,800
Amelia (3)	3,050	Mary Canas (1)	955
Antonio (2)	1,600	Mary D'Eon (1)	1,000
Barbara (1)	550	Mary E. Dion (1)	850
Bobby & Harvey (2)	1,900	Mary J. Landry (2)	1,050
Bright Star (2)	2,000	Mary R. Mullins (2)	1,650
Camden (2)	1,900	Mary Tapper (1)	1,000
Carol & Estelle (2)	2,000	Moonlight (3)	3,100
Catherine & Mary (2)	1,900	Muriel & Russell (3)	2,500
Charles S. Ashley (2)	2,200	New Dawn (2)	1,550
Dagny (2)	1,400	Newfoundland (2)	1,950
Dorothy & Mary (2)	1,850	Olive M. Williams (3)	2,600
Elizabeth M. (3)	3,200	Palestine (1)	1,000
Fairhaven (2)	1,800	Pearl Harbor (2)	1,900
Flamingo (2)	2,150	Pelican (2)	1,850
Fleet Wing (3)	2,450	Porpoise (2)	2,200
Four Sisters (1)	600	Red Start (3)	2,515
Francis J. Manta (2)	1,750	Sea Hawk (1)	600
Friendship (2)	1,450	Shannon (2)	1,100
Irene & Mabel (2)	1,695	Smilyn (3)	2,500
Janet & Jean (2)	1,900	The Friars (2)	1,950
Jerry & Jimmy (2)	1,800	Theresa A. (1)	1,050
Kingfisher (2)	1,950	Theresa R. (1)	1,000
Lainee K. (1)	900	Ursula M. Norton (2)	2,200
Linus S. Eldridge (2)	2,200	Virginia & Joan (2)	1,150
Louis A. Thebaud (2)	1,550	Wm. D. Eldridge (3)	2,778
Malene & Marie (3)	3,300	Wm. J. Landry (1)	650
Maridor (1)	900		

PORTLAND

Alice M. Doughty (5)	88,400	Silver Bay (3)	216,200
Althea (4)	45,000	Theresa R. (3)	156,600
Carolyn & Priscilla (2)	106,100	Thomas D. (2)	200,500
Clara Louise (2)	224,800	Vagabond (4)	108,300
Crescent (4)	17,100	Vandal (2)	163,300
Elinor & Jean (3)	51,600	Villa Nova (3)	119,500
Ethelina (3)	98,400	Willard Daggett (3)	26,100
Richard J. Nunan (2)	54,200		

BOSTON

Acme (5)	13,100	Marietta & Mary (3)	63,800
Addie Mae (4)	9,700	Maris Stella (1)	40,600
Adventure (L. Tr'ler) (2)	121,000	Marjorie (3)	12,100
Agatha & Patricia (3)	59,300	Marsala (1)	11,400
American Eagle (1)	20,400	Mary & Jennie (5)	16,100
Angie & Florence (2)	25,800	M. C. Ballard (2)	132,300
Annie & Josie (4)	13,700	Michael G. (3)	13,600
Arlington (2)	244,000	Michigan (2)	190,800
Atlantic (2)	120,000	Nancy B. (2)	42,000
Ave Maria (Dragger) (2)	8,900	Nancy F. (1)	14,900
Bay (2)	173,300	Neptune (2)	116,500
Billow (1)	65,500	Nova Antonio (4)	14,300
Bonnie (2)	133,300	Ohio (3)	118,800
Breaker (2)	122,000	Olympia (2)	75,600
Breeze (2)	133,500	Olympia La Rosa (3)	78,800
Calm (2)	217,800	Phantom (2)	202,500
Cambridge (2)	152,600	Phyllis & Mary (2)	20,600
Carmela Maria (Dragger) (5)	37,800	Pioneer (4)	19,900
Carmela Maria (L. Tr'ler) (3)	10,000	Plymouth (2)	127,300
Catherine B. (Dragger) (4)	58,800	Princess (4)	31,200
Catherine B. (L. Tr'ler) (1)	2,100	Quincy (2)	111,200
Cigar Joe (2)	38,600	Racer (2)	137,200
Crest (2)	167,900	Red Jacket (2)	279,300
Diana C. (7)	28,000	Roma (5)	15,100
Dorchester (2)	118,600	Rosalie D. Morse (3)	163,400
Drift (2)	178,600	Rosemarie (1)	15,000
Eddie & Lulu M. (3)	4,900	Rosie (6)	26,400
Elizabeth B. (2)	106,000	Rosie & Gracie (1)	34,000
Esther M. (3)	229,500	Rush (2)	131,500
Estrela (2)	148,300	St. Anna (4)	15,200
Famiglia (4)	28,400	St. Francis (2)	7,700
Fanny F. Hickey (5)	37,300	St. Joseph (Dragger) (3)	72,700
Flying Cloud (3)	254,500	St. Joseph (L. Tr'ler) (2)	4,800
4-C-688 (2)	4,400	St. Michael Angelo (1)	1,800
4-C-887 (1)	1,900	St. Peter (2)	46,800
4-E-885 (4)	8,200	St. Rita (1)	2,500
4-G-370 (2)	7,300	St. Rosalie (2)	48,300
4-G-673 (3)	11,400	St. Theresa (4)	13,000
4-H-823 (3)	9,700	Salvatore & Grace (2)	37,100
Francesca (3)	15,100	San Antonio (3)	7,900
Geraldine & Phyllis (2)	62,500	San Calogero (5)	16,900
Gudrun (2)	184,300	Santa Lucia (1)	7,200
Hornet (3)	7,400	Santa Rita (2)	5,900
Immaculate Conception (1)	13,000	Santina D. (2)	20,900
J. B. Junior (5)	139,300	Savoia (1)	4,900
J. B. Junior II (3)	6,300	Six Brothers II (4)	13,800
Jennie & Lucia (2)	33,500	Surge (2)	191,400
Josephine F. (2)	8,700	Texas (3)	127,600
Josephine P. II (2)	80,900	Thomas Whalen (2)	141,000
Leonard & Nancy (3)	70,900	Triton (2)	130,800
Little Nancy (4)	36,200	Uncle Guy (2)	62,600
Lorine III (2)	37,100	Wave (2)	260,500
Louise (2)	103,200	Weymouth (2)	135,600
Lucky Star (2)	137,900	Wm. J. O'Brien (2)	140,300
Lynn (2)	164,100	Winchester (3)	286,600
Maine (2)	123,200	Winthrop (3)	176,700
Margaret & Marie (3)	34,700	Wisconsin (2)	150,500
Maria Del Soccorsa (4)	13,100		

Scallop Landings (Gallons)

Mary Tapper (1)	800

GLOUCESTER

Agnes & Myrnie (2)	5,000	Gale (1)	2,000
Albatross (2)	336,000	Gertrude E. (1)	3,000
Alden (1)	15,000	Golden Eagle (2)	290,000
Alvan T. Fuller (1)	69,000	Hazel B. (2)	212,000
American Eagle (2)	28,000	Hilda Garston (2)	174,000
Annie (1)	3,000	Holy Family (1)	140,000
Anthony & Josephine (6)	26,000	Immaculate Conception (2)	16,000
Assertive (1)	140,000	J. B. Junior (1)	8,000
Ave Maria (2)	237,000	Jennie & Julia (3)	21,000
Babe Sears (1)	45,000	Johnny Baby (2)	2,500
Baby Rose (2)	227,000	Joseph & Lucia (2)	289,000
Benjamin C. (1)	203,000	Joseph S. Mattos (1)	31,500
B. Estelle Burke (2)	88,000	Julie Ann (1)	170,000
Bethulia (1)	5,000	Junojaes (1)	157,000
Bonaventure (1)	177,500	Killarney (1)	180,000
Brighton (1)	142,000	Kingfisher (2)	330,000
California (1)	12,000	Kurta (5)	7,500
Calista D. Morrill (3)	4,500	Lady of Good Voyage (2)	102,000
Catherine Amirault (2)	350,000	Leretha (1)	28,000
Chanco (1)	140,000	Little Flower (4)	26,000
Charlotte M. (1)	130,000	Lois T. (2)	6,000
Chebeague (2)	21,000	Lorine III (1)	6,000
Cigar Joe (2)	58,000	Lousam (1)	2,000
Columbia (1)	118,000	Mabel Mae (2)	305,000
Conquest (1)	46,500	Madame X (2)	3,500
Curlew (2)	322,000	Madonna (1)	5,000
Dartmouth (2)	181,000	Margie & Roy (2)	4,000
Dawn (4)	9,000	Maria Immaculata (3)	27,000
Dolphin (Glou.) (1)	132,000	Marie & Winifred (2)	100,000
Doris F. Amero (2)	103,500	Marion & Alice (1)	43,000
Emily Brown (1)	175,000	Mary A. (2)	51,000
Evalina M. Goulart (2)	90,000	Mary & Josephine (2)	380,000
Evelyn G. Sears (1)	8,000	Mary F. Curtis (1)	156,000
Falcon (5)	12,000	Mary Rose (1)	155,000
Felicia (1)	235,000	Mary W. (1)	26,000
Florence & Lee (2)	298,000	Mother Ann (1)	150,000
Flow (2)	270,000	Nancy B. (1)	6,000
Frances R. (3)	16,000	Nancy F. (2)	29,000
Gaetano S. (1)	145,000	New Bay (1)	115,000

(Continued on page 42)

OUTSTANDING SERVICE IN THE OYSTER FLEET!

Step aboard any oyster dredge working any Atlantic Coast beds from New England to the Gulf, and it's even money you'll find a Lister-Blackstone Diesel working too! *Mobjack*, owned by J. H. MILES & CO., Norfolk, is one of many such Lister-Blackstone equipped boats. When she was planned a Lister-Blackstone auxiliary was specified because of the superb record of one of these engines on *Fisherman*, an earlier Miles boat. Both engines are giving economical, trouble-free service, day in, day out—typical of Lister-Blackstone performance on many types of craft.

NEW REDUCED PRICES GIVE BEST DIESEL VALUE FOR YOUR DOLLAR; better-than-ever Lister-Blackstone value. Write us your requirements. Address Dept. A.

LISTER-BLACKSTONE MODEL CD 8 HP. DIESEL AUXILIARY, *typical of installation aboard 'Mobjack', driving 4½ KW generator, 60 GPM fire and bilge pump, and air compressor.*

Lister-Blackstone

LISTER - BLACKSTONE, Inc.
Factory, Sales & Service Headquarters: 420 Lexington Ave., New York 17, N. Y.
Parts Warehouses: MILWAUKEE, Wis., 3073 S. Chase St.;
BOSTON, Mass., Whesco Bldg., Fish Pier
Agents in BOSTON • NEW YORK • NORFOLK • NEW ORLEANS • MOBILE
TAMPA • MIAMI • HOUSTON • NEWTON (Iowa) • SEATTLE • LOS ANGELES
SAN FRANCISCO • SAN DIEGO • MONTREAL • TORONTO • WINNIPEG
VANCOUVER • ST. JOHNS • EDMONTON
Sold and Serviced in 37 Countries Throughout The World

Every Wire of BETHANIZED* TRAWLER ROPE is sealed against corrosion

*The bethanizing process, exclusive with Bethlehem, is a special method of applying zinc "armor" to steel wire. Bethlehem trawler rope—every wire, every inch of it—has this rust-resisting jacket. What's more, the coating is so ductile that even repeated bending does not cause it to crack or peel.

You'll like the extra life in Bethlehem trawler rope—the kind that's *bethanized*.

BETHLEHEM STEEL

BETHLEHEM STEEL COMPANY
Bethlehem, Pa.

When you think WIRE ROPE . . . think BETHLEHEM

PFLUEGER SHARK HOOKS

Instantly Set and Hold

You bring in sharks when they hit Pflueger Shark Hooks. Here's why! Pflueger's sharp points and barbs penetrate easily—hardened steel holds your fish until he is safely brought to the boat. A 32-inch steel chain leader to swivel resists all the pull and fight of any heavy fish. Commercial fishermen make more money with Pflueger Hooks. Ask your supplier.

THE ENTERPRISE MANUFACTURING CO.
AKRON 9, OHIO

PFLUEGER
(PRONOUNCED "FLEW-GER")
A GREAT NAME IN TACKLE

THESE BENDIX DEPTH RECORDERS HAVE EVERYTHING!

STILL ONLY $890 F.O.B. North Hollywood

For fishing—for navigation—and for safety, these low-cost Bendix Depth Recorders give you *all* the famous features which have made Bendix the overwhelming favorite along every coast line.

Model DR-7—Range 0-100 fathoms

ACCURATE, PERMANENT RECORDINGS

Instantly, on paper, the Bendix draws a running picture of schools of fish, kelp, rocks, wrecks and other hazards as you pass over them. You make your sets on fish, or navigate, from the chart—and you keep the chart for future reference.

SIMPLE, FOOLPROOF CONSTRUCTION

The reliability and long life of Bendix Depth Recorders is a by-word of every owner. Plug-in units and standard electronic parts make service easy for any competent radio man.

Model DR-9—Range 0-200 feet

Available Everywhere

In almost every port you'll find one of the more than 100 Bendix sales and service dealers. Get the complete story from him today. There are five Bendix Depth Recorders—one of them does *your* job best.

Pacific Division
Bendix Aviation Corporation
NORTH HOLLYWOOD CALIF

EAST COAST FACTORY OFFICE: 475 FIFTH AVE., NEW YORK 17, N. Y.
Export Division: BENDIX INTERNATIONAL, 72 FIFTH AVE., NEW YORK 11, N. Y.

Pam Ann (1)	130,000	St. Peter II (2)	225,600
Paul Howard (1)	133,000	St. Providenza (8)	28,000
Philip & Grace (1)	130,000	St. Rosalie (1)	28,000
Philip & Mary (1)	8,000	St. Victoria (1)	15,000
Phyllis & Mary (2)	7,000	Salvatore & Grace (1)	9,000
Pilgrim (1)	68,000	Sea Hawk (1)	23,000
Pollyanna (2)	225,000	Sebastiana C. (1)	20,000
Priscilla (1)	1,500	Serafina II (3)	30,000
Puritan (1)	83,000	Skilligolee (1)	4,000
Raymonde (1)	100,000	Sunlight (2)	176,000
R. Eugene Ashley (1)	100,000	Sylvester Whalen (2)	311,500
Rita B. (2)	98,000	Theresa M. Boudreau (2)	335,000
Ronald & Mary Jane (2)	295,000	Thos. J. Carroll (2)	240,000
Sacred Heart (3)	7,600	Trimembral (1)	2,000
St. Anthony (2)	253,000	We Three (1)	1,000
St. John (2)	2,000	Wild Duck (1)	150,000
St. Nicholas (2)	349,000	Win Story (2)	7,500
St. Peter (1)	2,000		

Scallop Landings (Gallons)

Bright Star (1)	800	Marmax (1)	1,100

NEW YORK

Alpar (1)	30,000	Katie D. (1)	50,500
Anna Esther (1)	6,000	Magellan (2)	81,800
Beatrice & Ida (2)	49,500	Mary Ellen (2)	25,200
Blackhawk (1)	12,000	Olivia Brown (1)	49,700
Edith L. Boudreau (2)	101,500	Paolina (2)	38,000
Felicia (2)	73,500	Portugal (2)	52,600
Gloria F. (2)	20,700	Sally & Eileen (2)	36,700
Gud Kay (2)	24,000	Sunapee (2)	55,000
John G. Murley (2)	90,000	Teresa & Jean (1)	46,000
Joseph S. Mattos (1)	36,000	Virginia (2)	60,600

Scallop Landings (Gallons)

Bright Moon (2)	800	Quest (1)	800
Buzz & Billy (2)	1,550	Rainbow (2)	900
Florence B. (2)	1,675	Reid (2)	1,040
Friendship (1)	543	Richard Lance (2)	775
Hazel S. (1)	350	St. Rita (2)	925
Julia K. (1)	300	S #31 (2)	1,550
Major J. Casey (2)	1,425	Venture (1)	500
Mary (2)	775	Victoria (2)	575
Norseman (1)	550	Whaling City (1)	1,100
Peerless (1)	300	Wm. D. Mangold (1)	325

Conn. to Have Shad Hatchery

Governor Chester Bowles signed, on Dec. 30, a bill appropriating $45,000 for the establishment of a shad hatchery on the Salmon River in East Haddam. He urged, however, that before anything is done State plans be correlated with those of the U. S. Fish & Wildlife Service.

The bill was enacted by a recent special session of the Connecticut Legislature. Proposed reconstruction of the hatchery, which was destroyed by fire in 1939, has been a controversial issue and had been rejected by several previous legislatures.

In signing the bill, Governor Bowles said "it is urgently important that every practical step be taken to encourage the growth and development of our State shad fishing industry."

Pointing out that Congress recently appropriated $75,000 for a six-year study of shad fishing on the East Coast, the Governor urged that plans for reconstruction of the East Haddam hatchery be deferred until Federal plans are revealed.

Old Boats, but Active

The 92-year-old tug *Alert* of New London is undoubtedly the oldest tow boat in the country, and probably in the world. Her serial number is 968, which means that she is the 968th documented vessel built in this country.

She was rebuilt in 1913, but the original keel is still in place. She grosses 73 tons, draws 8 feet, has a 15½ foot beam, and is 89½ feet long. She is a long and lean boat. Despite her age she goes about her chores each day under the command of Capt. John Johnson, taking with her a four-man crew.

With the title of oldest tugboat, the *Alert* must be content to play second fiddle to an even older commercial boat, the oysterman, *Salty Sea*. The *Salty Sea*, built in 1836, goes fishing every day out of her home port, Point Judith.

Suit Filed for Dragger "Palmer" Loss

A suit for $30,000 damages against the Government for the loss of the dragger *Nathaniel B. Palmer* has been filed by the boat owner, John Bindloss of Stonington. This follows a somewhat similar suit for $25,000 filed some time ago by Romeo Bessette of Berlin, N. H., cook on the *Palmer*, and sole survivor of the explosion that tore the dragger apart and brought death to three of her crew.

The charge in each case is negligence on the part of the Government for failure to issue warnings of unexploded bombs in the sea off Block Island where the tragedy occurred.

Virginia Has a New, Modern Fisheries Laboratory

The Virginia Commission of Fisheries and the College of William and Mary will have one of the most modern fisheries laboratories in the United States when the $157,000 two-story brick building now under construction at Gloucester Point is completed early this year.

The 40' x 80' building will include on the first floor, exhibit rooms, administrative offices and two classrooms for use by college students of William and Mary. On the second floor, the plans call for separate hydrography laboratories, constant temperature laboratories and general laboratories plus research rooms, library, and living accommodations for visiting scientists who may wish to remain overnight at the building.

Work on the 300' pier was completed several weeks ago at a cost of $16,800. The seawall and other waterfront improvements also have been completed, at a cost of $12,500.

Large tanks are being constructed in front of the laboratory building and river water will be piped to them to keep fish alive.

Oyster Population Survey

The oyster population on public rocks of the Rappahannock, Corrotoman, Piankatank and James Rivers was inventoried recently by the Virginia State Fisheries Laboratory. Special attention was given by the field party to signs of unusual mortalities in all rivers examined. Since the report of this past Summer's loss in the Rappahannock River, they saw no evidence of mortality.

The setting of oysters on natural rocks in the Rappahannock River, though not abundant, was found to be adequate for minimum replacement on tonging rocks. The setting diminished as the rocks were located farther away from the mouth of the River, a pattern noticed in many tributaries of Chesapeake Bay.

In the Corrotoman River, a tributary of the Rappahannock, and in the Piankatank River, setting was abundant on rocks in the lower portion, but diminished upstream. Conditions in the two last-named Rivers show that potentialities for seed oyster development are excellent. Oysters in both Rivers showed evidence of pink gills, but no recent mortalities. Oyster meats from the Corrotoman were thin and poorer than those from most of the rocks in the Rappahannock and Piankatank Rivers.

Natural seed rocks in the James River received a substantial 1949 set of spat on the natural cultch. At one rock, Wreck Shoal, more than 3,000 spat per bushel of bottom material were recorded. In addition to this, the sample contained over 1,600 small oysters of the previous years' setting per bushel of bottom material. In the James River there is also a diminution of intensity of setting as the rocks are farther away from the mouth.

The James River seed oyster beds have received an intensive working since the season opened. More tong boats are reported there than for some years with culling regulations strictly enforced.

Fisheries Commission Plans Improvements

Plans for more stringent enforcement of its regulations and expanded studies of seafood restocking possibilities were revealed by the Virginia Fisheries Commission in an annual report released December 31 by Commissioner Charles M. Lankford, Jr.

Lankford urged legislative appropriations for the purchase of faster boats and for hiring more personnel for enforcement purposes. Faster boats are needed because tongers and dredgers are constantly improving their boats, the report said.

The hydrographic and biological study of Chesapeake Bay waters authorized two years ago was termed the "most important single step ever taken in Virginia in behalf of the seafood industry."

Hampton Roads Area Landings

Totalling 1,428,000 lbs., practically all of which was landed by draggers, Hampton Roads area fish production for December, 1949, was nearly twice as large as that of the previous month, and 63,000 lbs. more than in December, 1948. With landings of 540,000 lbs., sea bass led the varieties, while scup, with 407,000 lbs., was runner-up, followed by fluke, with 186,000 lbs. The pound net catch during the month was only 1,600 lbs.

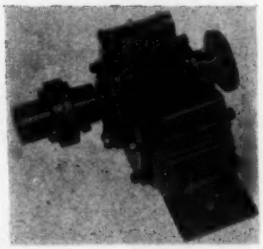
WALTER GEAR DRIVES

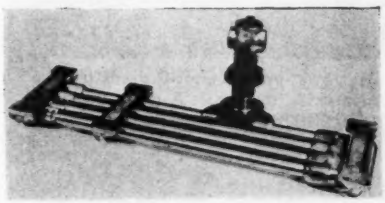
REDUCTION GEARS — Offset and In-Line
TRANSFER DRIVES — MARINE REVERSE GEARS

Investigate the new

REDUCTION GEAR COUPLING

Fits to any engine and boat. Available in various sizes and ratios.





The New DETACHABLE CLEAN-FLO FRESH WATER COOLING SYSTEM

Easier to install. More cooling efficiency. A profitable investment, longer engine life and trouble-free operation.

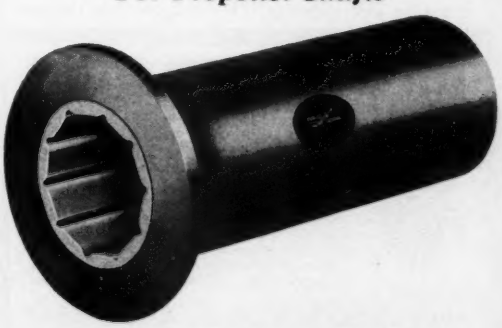
Literature on Request — Dealer Inquiries Invited

G. WALTER MACHINE COMPANY
84 Cambridge Avenue, Jersey City 7, N. J.

B.F.Goodrich

***Cutless* Bearings**

For Propeller Shafts



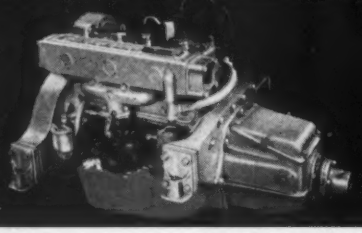
Soft rubber, water lubricated, Cutless bearings give years of trouble free service on fishing vessels. Resist heat, oil, and wear. Quiet and protect shafts too. There is a size and type to fit your boat.

Available at Boat Repair Yards and Marine Equipment dealers.

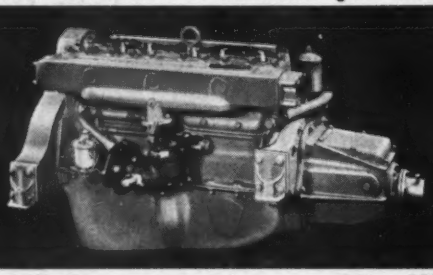
Lucian Q. Moffitt, Inc.
AKRON, 8, OHIO
Engineers and National Distributors

WORLD'S BEST BUYS IN MARINE ENGINES

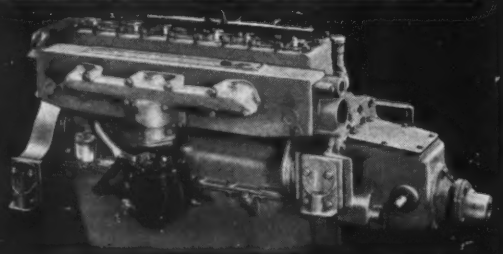
Built and backed by the world's largest manufacturer of marine products



Model B—Compact, power-packed Chris-Craft 60 h.p., 132 cu. in. Reduction drive available. A great value!



Model K—For more power and economy ... 95 h.p., 229 cu. in. Reduction drive, opposite rotation available.



Model M—Rugged, dependable ... 130 h.p., 320 cu. in. Available with reduction drive and opposite rotation.

PROOF! PROOF!

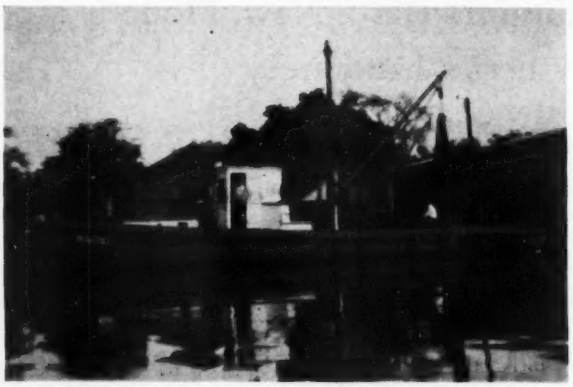
Ed Elliot

"I've never seen a marine engine that could compare with my Chris-Craft," writes Ed Elliot, secretary-treasurer of the Standard Dry Kiln Co., Indianapolis, Ind. "I have always paid particular attention to the power I get in a boat. I have never had a minute's trouble with my Chris-Craft Marine Engine. It has all the characteristics I want plus real economy in operation. From standpoints of both engineering and performance, I can recommend Chris-Craft Marine Engines to anyone."

FISHERMEN! Buy the best for less—buy Chris-Craft Marine Engines. A complete line. Reduction drives ... opposite rotation ... also high speed engines for light, fast hulls. Ask your Marine Dealer, Boat Yard or Boat Builder for prices and data. These world-famous engines will do a better job for you.

Chris-Craft

MARINE ENGINE DIV., ALGONAC, MICH., U.S.A.



52' shrimper "Naomi", Capt. Hucks Caines, owned by Simpkins Fish Co., Georgetown, S. C. She is powered by a 165 hp. Gray Diesel with Twin Disc 1.5:1 reduction gear.

South Carolina Court Test of Shrimping Laws Begins

South Carolina laws regulating Coastal shrimping have, in effect, been found unconstitutional, a special three-judge Federal Court was told last month by two commercial fishermen. A decision a year ago by a similar court covers the issues at stake, the fishermen contended through their lawyer. This decision declared a $2,500 South Carolina license for out-of-State shrimp boats working South Carolina waters to be unconstitutional.

The court reserved decision after hearing arguments and a few witnesses. It asked for written briefs of arguments.

Laws in question now allow the inspector of the State Board of Fisheries to enter any fishing property, boat or wharf, without a warrant and seize property if violations of State fishing laws are found.

Attorney Aaron Kravitz of Savannah, Ga. argued for the fishermen, and stated that in his opinion there was no necessity for these statutes, that they are intimidating the shrimpers and seriously hamper shrimping operations.

Fisheries Advisory Board Meets

The Marine Fisheries Advisory Board of the State Board of Fisheries met last month at Charleston. The Board was set up in an effort to give representative commercial and sports fishermen an opportunity to discuss matters with the State Board. Chairman Andrew H. DuPre of the State Fisheries Board was in charge of the meeting.

Members of the advisory committee include Sterling Harris and Edward E. Sheppard, both of Beaufort; Rene Cathou, of Georgetown; Hugh McGinn of Little River; Keith Powers, of Meggett; Walter L. Shaffer and Thomas W. Perry, both of Charleston; J. S. Graves of Bluffton; and G. Robert Lunz, director of the Bears Bluff Laboratories.

Fishing Trawler Burns

The 50-ft. shrimp trawler *Maria*, which had left Charleston for Fernandina, Fla. burned and sank off Brunswick, Ga. last month. All persons aboard were reported safe at Brunswick after being adrift 15 hours on a life raft.

Henry Morris, owner-captain of the trawler, told Brunswick Coast Guardsmen the vessel caught fire and burned in 30 minutes. Capt. Morris operated the *Maria* out of the Clyde-Mallory docks last season.

Beaufort Crab Industry Featured in "Post"

The crab canning industry in Beaufort was featured in an illustrated article in the *Saturday Evening Post* of January 7. The story was written by Samuel Hopkins Adams.

The first crab canning plant on either the Atlantic or Gulf Coast was established in Beaufort by the Blue Channel Corp. in 1938. This industry has now spread along both coasts and has developed into one of the larger fishing industries in this country.

Texas Shrimp Most Important Species in October Catch

Landings of fishery products at Texas ports during October amounted to 5,039,314 pounds, compared with 11,553,785 pounds in the same month last year, according to figures released in December by the Fish & Wildlife Service in cooperation with the Texas Game, Fish & Oyster Commission.

Reduced landings of menhaden, which amounted to only 386,260 pounds, compared with nearly 7.5 million pounds in October 1948, accounted for the decline.

Shrimp were the most important item taken during the month. Landings of these shellfish, which amounted to 4,372,102 pounds, accounted for 87% of the Texas catch during October.

During the first two months of the current fiscal year (September and October), landings at Texas ports amounted to 17,602,562 pounds, nearly four per cent more than was taken during the same period last year.

The Aransas area led in the production of redfish with 21,764 pounds, and was second in the production of drum with 28,415 pounds. This area was also second in the production of shrimp with 1,243,458 pounds. The Laguna area led production with 1,577,432 pounds.

License Law Sustained

Issuance of a permanent injunction against 46 commercial fishermen to prevent their fishing in Texas waters without Texas licenses was ordered December 17 by District Judge J. Harris Gardner at Austin.

The Judge, in effect, sustained the State's new license law passed by the 51st Legislature last year, but he indicated that he would like to see the higher courts rule on the matter.

Priority is given to Texas fishermen who have held licenses previously, then Texas fishermen applying for licenses for the first time; out-of-state fishermen and boats are taken care of last.

Polk Hornaday, attorney for the fishermen said a direct appeal to the State Supreme Court likely would be made to test the law's constitutionality.

Aransas County Million-Dollar Industry

A breakdown of the 1948 dollar value of the commercial fishing industry on the Texas coast shows the fishing industry in Aransas County to be assessed at $1,311,000. The survey of the entire coast was made recently by the Texas Game, Fish & Oyster Commission.

Licensed fishermen in the Aransas area number 223 and operate 155 boats, valued at $927,000. Thirty-eight of the boats are equipped with two-way radios and 18 have receivers. One of the larger trawlers has installed a depth recorder. Twenty of the sea-going vessels are Diesel powered, the remaining 135 have gasoline engines. Fishing boats pay out $76,000 for fuel each year; $33,000 for ice and $75,000 for gear.

Seek to Save River Fishing

Ten men connected with the shrimping industry, Mayor Pro Tem Bessie McFarlane, Mayor H. A. Muckleroy, Game Warden Frank T. Mayne and County Health Officer Dr. W. H. Mann met last month to see if something could be worked out to eliminate the excessive number of dead fish in the Old Brazos.

Dr. Mann told the group that he had taken water samples from the river, running from the dead end to the jetties, and had never found any trace of chemical poison in the water. He said, however, that in the dead end, nearly all tests showed the oxygen content of the water to be too low to support scale fish life.

He attributed several possible factors as being responsible for the situation. One was the fact that there is practically no circulation of water at the dead end. Another was the fact that often scrap fish are culled from the shrimp catch after the boats come into the river. The hundreds of tons of scrap fish would naturally float with the tide to the dead end, then as the tide goes down, be left ashore on the banks.

It was thought that if pure oxygen or compressed air could be pumped into the water of the dead end it might alleviate the problem. Al Gollott said he felt sure the shrimping industry would cooperate wholeheartedly in the experiment.

Water samples will be taken before the oxygen is added and then samples will be run every day for a week thereafter to see what the results are.

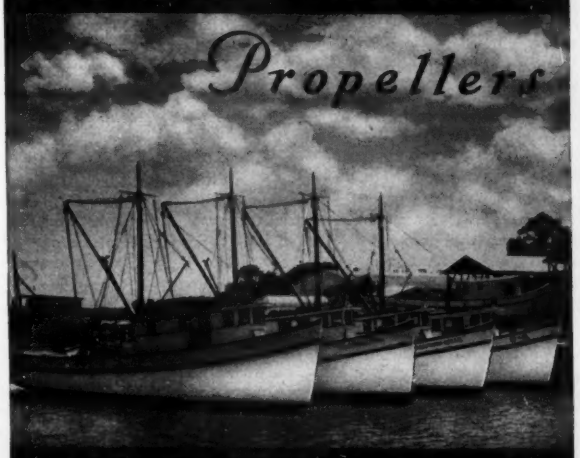
NETS
RAKES
TONGS

Codfish Gear — Bait Netting
Lobster Pot Heading Twine
Corks — Rope — Wire Baskets

LARGE STOCK
Prompt, intelligent, personal attention to your order

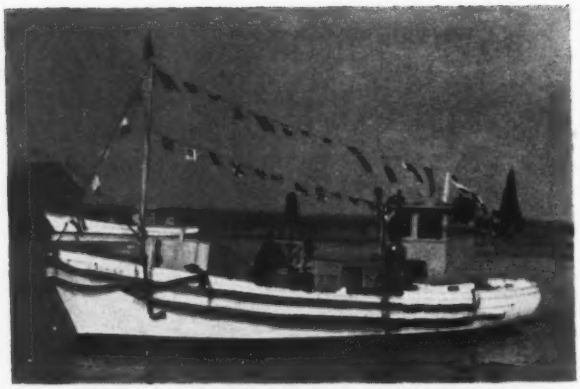
W. A. AUGUR, Inc.
35 Fulton Street — New York 7, N. Y.
BEekman 3-0857

The Best for the Fisherman
COLUMBIAN
Propellers



Part of a large fleet of new 60' Columbian equipped shrimp trawlers built by the Diesel Engine Sales Co., St. Augustine, Florida. The quality and performance of Columbian propellers is proved by fishing fleets everywhere. Catalog on request.

COLUMBIAN BRONZE CORP.
Freeport, Long Island, New York



Oyster schooner "Cashier" owned by Reed and Reed, Port Norris, N. J.

New Jersey Century-Old Schooner Re-christened

On December 21 an oyster vessel first launched 100 years ago embarked upon her second century of service. She is the schooner *Cashier*, built in Cedarville in 1849, and now the oldest sailing vessel in the register of the Philadelphia Customs Office.

The *Cashier* was rechristened at Delaware Bay Shipbuilding Co. at Leesburg, where she was converted to power dredging in 1945 for her owners, Reed and Reed, of Port Norris. She was sponsored by Sarah Jane Reed, daughter of Capt. Carl Reed, skipper and part owner of the vessel.

Fifty-four feet in length, with a beam of 17 feet, the ancient vessel, now as sound as when new, was originally built for the oyster business in season, and for the lumber and freight trade during the Summer. She is of 21 gross tons, with a net of 10 tons. She is now used exclusively in the oyster business. Power is supplied by a 143 hp. Chrysler Royal engine.

Codfish Steal the Show

Codfish are stealing the Winter commercial fishing season laurels from the Wildwood-by-the-Sea and Cape May, N. J. fishing fleets. Codfish have been nabbed in greater numbers and in better size than for many years, and they have been present in Jersey Cape waters since November.

Although a few years ago, a codfish over 40 pounds was a rarity, this Winter commercial fishermen have boated many over 40 pounds. The largest boated so far this season weighed over 58 pounds. Moderate weather, influenced by the Jersey shoreward movement of Gulf Stream eddies, is believed to be the cause of the good Winter fishing season.

Wildwood commercial fishermen racked up a fine 1949 season, due to fine catches of scup, weakfish, mackerel. Only a few more croakers were taken than in 1948.

Surprise development of last year off the Jersey Cape was the influx of white marlin. Another surprise was the large number of dolphin that appeared off the coast of Wildwood. On the other hand, tuna fishing was poor. The biggest tuna boated weighed only 408½ pounds. In previous seasons, tuna ranging from 700 to 800 pounds were often nabbed off the Jersey coast.

Smith Fleet Is Rebuilt

The Barbour Boat Works, of New Bern, North Carolina, has completely rebuilt six boats for the Smith commercial fleet of Monmouth, N. J., converting several from steam to Diesel.

New Fish and Game Head

A. Heaton Underhill, of Boston, Massachusetts, is the new $8,500 a year executive of the New Jersey Fish and Game Council. He will take office on April 1, 1950.

Jersey Cape Ban on Crabbing Sought

A ban on crabbing during the Winter months is advocated by the New Jersey State Federation of Sportsmen's Clubs. The Federation adopted a resolution asking the State to adopt a law for the proposed closed season.

North Carolina Fisheries To Be Studied by "Albatross"

The United States Fish & Wildlife fisheries research vessel *Albatross III* was due in Morehead City on January 14 to begin six weeks of work in North Carolina waters. An increase of $20,000 in the appropriation for operation of the vessel was granted by the last session of Congress, and is being used for the North Carolina fisheries investigations.

En route to Morehead City, scientists were to continue hydrographic studies of the middle Atlantic bight, distribution of temperatures, salinities and densities off New Jersey, Delaware, Maryland and Virginia, also between Oregon Inlet and Little River Inlet, North Carolina.

Additional data will be obtained on bottom topography and depth recorders will be tested for locating schools of fish. One of the main objects of the study is to locate new and safe trawling grounds.

Dr. C. A. Atkinson of the Fish & Wildlife laboratory, Piver's Island, will undertake fish tagging projects while the *Albatross* is in North Carolina. The vessel will also explore the possibility of expanding the trawl fishery in water from 10 to 100 fathoms between Wimble Shoals and Cape Fear.

The *Albatross* is scheduled to leave Morehead City on February 24 and continue investigations as it moves northward to Woods Hole, Mass.

Menhaden Fishing Improves

Menhaden fishing is improving in Morehead City, after one of the poorest Falls in the history of the industry. One day late last month 17 menhaden boats supplying one factory landed two million menhaden. The only difference between the fish taken during December and those which normally are landed during November is the size, those taken last month being small.

Food fishing also is improving. Many deep-sea trawlers are basing at Morehead City, and a number that are basing at Ocracoke or near the fishing grounds of Cape Hatteras are running some nice catches to the local fish packing houses.

One of the best catches in the history of commercial fishing was made in Core Sound recently. The crews operating long haul nets for Clayton Fulcher & Sons of Atlantic caught almost one-half million pounds of spot in one day's haul.

Two Boats Damaged by Fire

The fishing boat *Dixie B.* of Morehead City caught fire off Cape Hatteras last month and was damaged extensively throughout the engine room and cabin. All hands aboard escaped uninjured. The vessel is owned by E. C. Ballou of Morehead City.

Fire extensively damaged the *J. Earle Morris*, menhaden boat tied up at the Barbour Marine Supply Co, dock, Beaufort, recently. The fire is reported to have started when a small engine backfired while men were trying to start it. Flames burst out and before they were brought under control, the whole lighting system was severely damaged. Twelve of the crew were aboard at the time, but all escaped injury.

The *Morris*, owned by Quinn Fisheries, is commanded by Capt. Neal Frink.

Injured in Boat Explosion

Two Morehead City men, Alton Dickinson and R. B. Lewis, received first degree burns on the face, hands and arms when a gas explosion ripped apart the cabin of their shrimp trawler *Sea Bird* at the Belhaven Fish & Oyster Co. dock, Morehead City. The boat is owned by E. D. O'Neal.

Exact cause of the explosion is uncertain, but firemen and by-standers stated that it appeared to have been caused when the engine was started. Fifty gallons of gas had leaked from the tank on the boat and settled in the bilges. Cost of repairing the boat was estimated at $2,000.

Menhaden Boat Sinks

The *U. H. Cozart*, menhaden boat owned by the Phillips Fish factory, Morehead City, sank last month nine miles from Ocracoke and only about 300 yards from shore. It is believed she struck a wreck.

The crew, most of them from Virginia, were picked up by the *Charlie Mason*, a Harvey Smith menhaden boat, and taken into Ocracoke.

Surrette MARINE BATTERIES

Used on Capt. Ben Pine's Gloucester Dragger "Puritan"

A set of extra heavy duty GTS-15, 114 volt Surrette Marine Batteries is used aboard the 95' dragger "Puritan", for which Captain Ben Pine is agent.

One of the large, consistent highliners in the Gloucester fleet, the vessel is fishing out of New York for the Winter under command of Capt. Reginald Pike.

Surrette GTS Extra Heavy Duty Marine Batteries are the finest available at any price, the most powerful and rugged batteries made of their size.

Triple Insulation—Microporous all rubber permanent separators—Fibreglass and slotted rubber envelopes insure long life.

Plates—Giant ¼" thick positive plates with special resistox grid design one of the principal reasons why Surrette GTS types have such exceptionally long life.

Construction—Assembled in genuine hard rubber cases makes them extremely compact and they require much less space than other batteries of equal capacity.

Specify the battery that is first choice of the highliners. Write for the name of your nearest dealer.

THE SURRETTE STORAGE BATTERY CO.
SALEM, MASSACHUSETTS

Variations in Oyster Set

(Continued from page 15)

suggestion that under natural conditions oyster larvae may perish from starvation in large numbers sounds highly improbable. Several years ago I would not even have considered such a suggestion because I know that, as a rule, the waters of Long Island Sound are comparatively rich in plankton. Yet, during the last few years, especially since the work on cultivation and physiology of oyster larvae was begun at our laboratory, more and more evidence is accumulating that oyster larvae cannot utilize most of the forms of ultraplankton regardless of their small size.

It has been found that the addition of mixtures of laboratory cultures of ultraplankton forms measuring from 2 to 5 microns in size, thus small enough to be swallowed by the larvae, will not make oyster larvae grow. Apparently the mixture of plankton given to the larvae did not contain forms which could be assimilated by them. Yet, the same food given at the same time to cultures of larvae of other lamellibranchs, such as clams, was readily utilized by them.

Several variations of this experiment were run to be sure that the oyster larvae were not deprived of their food by the larger and more vigorous clam larvae. To achieve this, some cultures were composed of a large number of oyster larvae and relatively few clam larvae. Regardless of the ratios between the clam and oyster larvae and the ratios in number of larvae per given volume of water the results were always the same, namely, that the clam larvae grew very rapidly on the food they were given while the oyster larvae showed no growth.

Our field observations support our contention that there may be a difference in the ability of various mollusk larvae to utilize the food found in the water. For example, it seems peculiar that while clam larvae of all stages are almost always found during the Summer, oyster larvae seem to disappear within a few days after they hatch from the eggs.

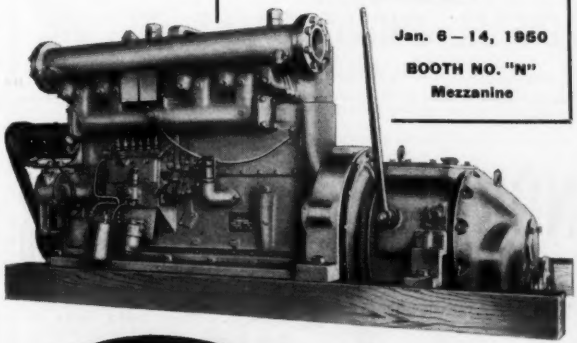
Therefore, we are led to believe that the absence of proper food may be the cause of the failure of oyster larvae of Long Island Sound to live in the setting stage.

SEE THE NEW *Super-Duty* "RED WING"
MARINE DIESEL SIXES
and other GAS and DIESEL MODELS
at the NEW YORK MOTOR BOAT SHOW

Jan. 6—14, 1950
BOOTH NO. "N"
Mezzanine

Model D6-160
(6 cyl. 5¼" x 6" — 779 Cu. In.)

Model D6-200
(6 cyl. 6¼" x 6½" — 1197 Cu. In.)



Red Wing MARINE ENGINES
Full line of Gasoline and Diesel Types
7 H.P. to 200 H.P.

Instant, Dependable, Smooth Power at Low Cost!
Red Wing advanced design features mean better performance and economy.
Write for detailed, illustrated bulletins on these and new Diesel models 30 H.P. and up.

RED WING MOTOR CO., Red Wing, Minn.

SELECTED QUALITY

Pride BRAND DEEP SEA SHRIMP

Caught by Our Own Boats

No order too large or too small, from a carton to a carload

McCLAIN'S SEA FOODS SABINE, TEXAS

Main Office: 231 So. Front St., Philadelphia, Pa.

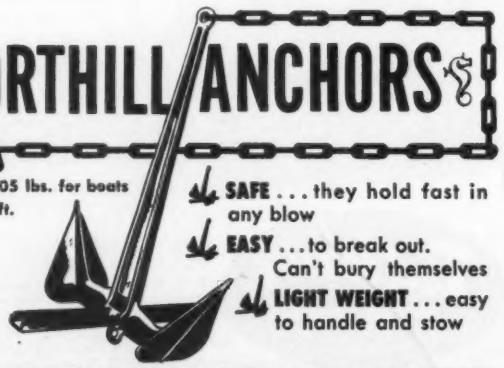
Telephone, LOmbard 3-1303

Builders of Some of the World's Finest Draggers and Trawlers

DIESEL ENGINE SALES CO., Inc.

ST. AUGUSTINE, FLORIDA

NORTHILL ANCHORS



3 to 105 lbs. for boats to 80 ft.

SAFE . . . they hold fast in any blow

EASY . . . to break out. Can't bury themselves

LIGHT WEIGHT . . . easy to handle and stow

NORTHILL COMPANY, INC., LOS ANGELES 45, CALIFORNIA • Subsidiary of THE GARRETT CORP.

Vineyard Bailings

By J. C. Allen

There is a certain period in the year when we can understand and sympathize with the cockeyed view of the average landsman who cherishes the idea that a fisherman's life is a perpetual yachting party.

In the midst of a green December, wherein there has been some "window-glass" ice a couple of times, and for the rest of it, relatively smooth seas and high barometers, inshore and on the land, we can understand why the landsman fails to understand that 50 miles of distance can make 50 times the difference in weather.

For we have to report a slow month in all bearings with which we are acquainted. Slow because of weather, slow because of lack of fish, and slow because of markets that have weakened in spots.

Our small craft, and they are numerous, can't run far to sea in Winter. If the weather holds good, yes, they could get along as well as in Summer, but if it breezed, as is likely to be the case, there would be some gaps in the ranks of the homefolks, and so, being wise, they don't venture too far.

Well, the fish have played out along the land. The luck held out later than some years, but eventually the calendar had its way, although our last porpoise, which the Oceanographic Bureau caught and called a common dolphin, showed up during the month, chasing herring.

Shell-Fishing Good

Thus inshore activities have been largely confined to shell-fishing which is still good in three townships as the end of December heaves in sight, with a promise of continued luck.

More Yellowtails Than Expected

Offshore those of our gang who travel that way have really taken more yellowtails than might have been expected. Actually we don't know, and we doubt if anyone would venture to say, whether this means that the fish are bunching up better, whether there are indeed more of them or whether it is because the fleet has shrunken some during the past several months.

More Pollock Than Cod

We definitely have not had the cod this Fall that we had a year ago, especially inshore. There was every reason why they should have shown up if there were any to show, for the bait was never thicker. The water was filled with herring, and they hung right on until things got chilly. The pollock did come, as they never came before, but not the cod. It strikes us as somewhat odd that, despite this falling-off which seems noticeable everywhere, the price has dropped until steak cod brought the least (some weeks) that we recall in many years. Can it be that this "sacred" fish is losing its popularity? We wonder.

Trap-Fishing on the Up-Swing

Trap-fishing is on the up-swing, despite the poor season made by our own men here. So far as we can determine, trap-fishing as a whole along the coast, was not too bad.

We believe that some little changes may have to be made in locations, and maybe, the type of gear used. But we know the fish ran because we saw them as scores of others did, and they were not taken because nobody would or could try. Yet, it is noteworthy, we think, that one of our sets of trap-gear remained fishing until the first of December, and earned more during the month of November than in any other month of the year. We hate to squawk about climatic changes, along with all the other things, but there could be something to it.

But now, it's a deserted sea that surrounds us except for the occasional vessel bound in or out. The single-masted draggers lay to the dolphins, wearing out their fenders, or tow scallop-dredges around the harbors. The dead spot of the year is upon us, the time when all hands talk about selling their boats and raising chickens. The time when the Christmas eels and tauthaug have all been sold and the cars are empty on the beaches. A time when fishermen hang around in groups, on the beach or elsewhere, according to nature and opportunity. And landsmen look and mutter things about the easy life, time to kill, etc.

New Brunswick Report

By C. A. Dixon

Although the unprecedented mild weather which settled over southern New Brunswick and elsewhere in the Maritime Provinces during the holiday season was very favorable for fishing, it has been described as a dull season by sardine men and line fishermen who found fish very scarce. Some of the scallop fishermen did well, but production of clams fell off, due to the closing of the clam flats in certain areas. Receipts at the several clam canneries in Charlotte County proved quite satisfactory, however. Winter seining of sardines has not commenced, but it is reported that some of the Canadian factories plan to resume packing operations early in the new year if fish supplies are sufficient to warrant the opening of the plants.

Lobster Fleet Increased

The number of new boats added to the lobster fishing fleet of southern New Brunswick, including Grand Manan, has been a considerable one, and the finely appointed craft are a credit to their builders and owners. Lobster fishing has been more or less of an intermittent nature during the Fall and Winter season due to interruption by storms and gales. Earlier, damage to lobster gear was quite heavy in some places. Just before Christmas, however, the fishermen enjoyed several consecutive days of calm weather, and fairly good catches were reported. Most of the traps being fished as the old year passed were set in offshore waters.

Pumping Herring Scales

Speculation as to the outcome of the collecting of herring scales at the seines and weirs, through the use of newly installed pumping machinery aboard the boats of the scale buyers, is rife. Some see in this innovation the wind-up of a very lucrative business enjoyed for many years by fishermen who collected scales by hand, and made of it a regular occupation all the year. The pumping gear is similar to that used in unloading sardines at the factories. It is too early yet to determine on what basis the scales will be handled. Some say the factorymen who buy the sardines will share in the scale money with the scale buyers, while others claim the fishermen who own the weirs will demand the scale money, or at least a share of it. The idea is being advanced that the sardine factory owners buy the sardine scales and all from the fishermen, and therefore own the scales as well as the fish when they are taken from the seines. Others claim the fishermen must be paid for the scales as well as the fish when they are bought at the weirs and seines. The newly installed suction pumps on the scale buyers' boats are so arranged that the fish and the scales are separated before the sardines enter the holds of the boats.

St. Andrews Bay Scalloping

The several boats engaged in scallop dragging in the St. Andrews Bay area the latter part of December did very well due in a large measure to the calmer weather which prevailed. Some of the boats reported catches of from 25 to 30 gallons, and 90-odd gallons for three days' work.

Campobello Handlining

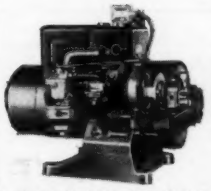
Several boats of the Campobello fleet have been engaged in handlining for codfish and fairly good catches have been made. Even as late as the third week in December pollock were being caught in some places.

For almost a lifetime pollock fishing wound up every year by the 20th of October, but in the last few years catches have been made during the entire month of November and into the last month of the year.

New Weirs Next Spring

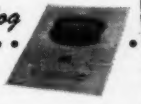
The stripping of the sardine weirs started early last month and fish had about vanished. A number of Deer Island weirmen in the Leonardville-Chocolate Cove area enjoyed a banner year and some of the weirs brought in more money to their owners than ever before. On the other hand, many of the top-notch weirs failed almost entirely to catch any of the 1949 schools. It is reported that new weirs will be built next Spring, and new men will try their hand at the game.

ONAN MARINE Electric Plants



Compact, true marine design with built-in safety features. Provide dependable electric power for lights, bilge pumps, radio, appliances, on pleasure or work boats. One and two-cylinder heavy-duty water-cooled engines assure long life. Easy to install. A.C., D.C. and Dual Purpose models —350 to 3500 watts.

Write for Catalog



D.W. ONAN & SONS INC.

6008 Royalston Ave., Minneapolis 5, Minn.

DeWitt

AMERICAN-MADE

FISH HOOKS

All styles, sizes and finishes.

WRITE FOR Free CATALOG

Bill DeWitt DIV.

101 Commercial Street

AUBURN, N. Y.

The K-W

TRACKER

the best little RDF ever!

COMPLETE WITH 2-BANDS

BEACON AND BROADCAST

SELECTIVE — RUGGED

Ideal For Any Boat Owner

$180. plus $4.13 tax

Write for Circular

KELVIN-WHITE CO.

Boston — 90 State Street

New York — 38 Water Street

Baltimore — 406 Water Street

Long Beach, Cal.-4000 E. Anaheim Blvd.

COMPLETE REPAIR FACILITIES

Our all-around service includes all types of engine overhauling and repairs, rigging service, hull repairs and alterations, electrical work, etc. Your entire job can be done quickly in our yard by experienced men.

FRANK L. SAMPLE JR., INC.

Shipbuilders

BOOTHBAY HARBOR, MAINE

Where-to-Buy Directory

Companies whose names are starred (*) have display advertisements in this issue; see Index to Advertisers for page numbers

ANCHORS

R. S. Danforth, 2121 Allston Way, Berkeley, Calif.
The Maxim Silencer Co., 65 Homestead Ave., Hartford, Conn.
*Northill Co., Inc., Los Angeles 45, Calif.

BATTERIES, STORAGE

"Exide": Electric Storage Battery Co., Allegheny Ave. and 19th St., Philadelphia, Pa.
*Surrette Storage Battery Co., Salem, Mass.
Willard Storage Battery Co., Cleveland, Ohio.

CAN MANUFACTURERS

Continental Can Co., 100 E. 42nd St., New York, N. Y.

CLUTCHES

Kinney Manufacturing Co., 5341 Washington St., Boston, Mass.

COLD STORAGE

Seb. Messcher, 3940-46 So. Calumet Ave., Chicago 15, Ill.
Quaker City Cold Storage Co., Philadelphia, Pa.

COMPASSES

*Kelvin & Wilfrid O. White Co., 90 State St., Boston, Mass.
Marine Compass Co., Pembroke, Mass.
*E. S. Ritchie & Sons, Inc., 112 Cypress St., Brookline, Mass.
Sperry Gyroscope Co., Division of the Sperry Corp., Great Neck, N. Y.

CORDAGE MANUFACTURERS

American Manufacturing Co., Noble and West Sts., Brooklyn, N. Y.
*Columbian Rope Co., Auburn. N. Y.
The Edwin H. Fitler Co., Philadelphia 24, Pa.
*New Bedford Cordage Co., 233 Broadway, New York, N. Y.

DEPTH FINDERS

*Bendix Aviation Corp., Pacific Div., 475 Fifth Ave., New York 17. N. Y.
*Bludworth Marine, 100 Gold St., New York 7, N. Y.
Kaar Engineering Co., Palo Alto, Calif.
Pilot Marine Corp., 39 Broadway, New York 6, N. Y.
Submarine Signal Division, Raytheon Manufacturing Co., 138 River St., Waltham 54, Mass.

DIESEL AUXILIARY SETS

Detroit Diesel Engine Division, General Motors Corp., Series 71 Marine Diesel, 13400 W Outer Drive, Detroit 23, Michigan.
*Lister-Blackstone Inc., 420 Lexington Ave., New York 17, N. Y.
*D. W. Onan & Sons, Inc., Minneapolis 5, Minn.
Universal Motor Co., 436 Universal Drive, Oshkosh. Wis.
Witte Engine Works, Kansas City 3, Mo.

ENGINE CONTROLS

Sperry Products, Inc., Hoboken 1, N. J.
*Westinghouse Air Brake Co., Wilmerding, Pa.

ENGINE MANUFACTURERS

Diesel Engines

Atlas Imperial Diesel Engine Co., Oakland, Calif.
The Buda Co., Harvey, Ill.
*Caterpillar Tractor Co., Peoria, Ill.
*Cooper-Bessemer Corp., Mount Vernon, O.
*Cummins Engine Co., Columbus, Ind.
Detroit Diesel Engine Division, General Motors Corp., Series 71 Marine Diesel, 13400 W. Outer Drive, Detroit 23. Michigan.
Enterprise Engine & Foundry Co., 18th and Florida Sts., San Francisco 10, Calif.
Fairbanks, Morse & Co., Chicago, Ill.
Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.
Kermath Manufacturing Co., 5896 Commonwealth Ave., Detroit 8, Mich.
*The Lathrop Engine Co., Mystic, Conn.
*Lister-Blackstone Inc., 420 Lexington Ave., New York 17, N. Y.
Murphy Diesel Co., 5317 West Burnham St., Milwaukee, Wis.
*Nordberg Mfg. Co., Milwaukee, Wis.
The Palmer Bros. Engine Corp., River Road, Cos Cob, Conn.
R. H. Sheppard Co., Inc., 30 Middle St., Hanover, Pa.
Wolverine Motor Works Inc., 1 Union Ave., Bridgeport, Conn.
Worthington Pump & Machinery Corp., 421 Worthington Ave., Harrison, N. J.

Gasoline Engines

Atlas Imperial Diesel Engine Co., Oakland, Calif.
*Chris-Craft, Marine Engine Div., Algonac, Mich.
*Chrysler Corp., 12211 East Jefferson, Detroit, Mich.
Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.
Kermath Manufacturing Co., 5896 Commonwealth Ave., Detroit 8, Mich.
*The Lathrop Engine Co., Mystic, Conn.
*Nordberg Mfg. Co., Milwaukee, Wis.
*Packard Motor Car Co., 1580 E. Grand Blvd., Detroit 32, Mich.
The Palmer Bros. Engine Corp., River Road, Cos Cob, Conn.
*Red Wing Motor Co., Red Wing, Minn.
Universal Motor Co., 436 Universal Drive, Oshkosh, Wis.

ENGINE DEALERS

Atlantic Engine Supply, Inc., 491 Neponset Ave., Boston 22, Mass.
*Cummins Diesel Engines, Inc., 209-13 N. 22nd St., Philadelphia 3, Pa.
*Cummins Diesel Engines of New England, Inc., 18 Hurley St., Cambridge 41, Mass.
*Cummins Diesel Sales and Service of New York, Inc., 1030-1044 Leggett Ave., New York 55, N. Y.
Diesel Marine & Equipment Corp., 342 Madison Ave., New York 17, N. Y.
The Edson Corp., 49 D St., South Boston, Mass.
Harbor Supply Oil Co., 39 Portland Pier, Portland, Me.
Walter H. Moreton Corp., 9 Commercial Ave., Cambridge, Mass.
H. O. Penn Machinery Co., Inc., East River and 140th St., New York, N. Y.
*Perkins-Eaton Machinery Co., 376 Dorchester Ave., South Boston 27, Mass.

EXHAUST SILENCERS

John T. Love Welding Co., Walen's Wharf, Wharf St., Gloucester, Mass.
The Maxim Silencer Co., 65 Homestead Ave., Hartford, Conn.

FILLETING MACHINES

Fish Machinery Corp., 4 Fish Pier, Boston, Mass.

FISHING GEAR

*F. J. O'Hara Trawling Co., 211 Northern Ave., Boston 10, Mass.
*Westerbeke Fishing Gear Co., Inc., 279 Northern Ave., Boston, Mass.

FISH MEAL MACHINERY

*Enterprise Engine & Foundry Co., Process Machinery Div., 18th and Florida Sts., San Francisco, Calif.

FLOATS

New England Fishing Gear Co., 301 Eastern Ave., Chelsea, Mass.
J. H. Shepherd Son & Co., 1820 East Ave., Elyria, Ohio.

FUEL INJECTION SYSTEMS

G & K Diesel Service, 12 Atlantic Ave., Boston, Mass.

GENERATORS

The Imperial Electric Co., Akron, Ohio.
*D. W. Onan & Sons, Inc., Minneapolis 5, Minn.

HOOKS, FISH

*Bill DeWitt Div., Hook Mfrs., Auburn, N. Y.
O. Mustad & Son, Oslo, Norway.
*"Pflueger": Enterprise Mfg. Co., 110 Union St., Akron, Ohio.

ICE BREAKERS

Gifford-Wood, Hudson, N. Y.
Link-Belt Co., 2410 W. 18th St., Chicago 8, Ill.

LORAN

Sperry Gyroscope Co., Division of the Sperry Corp., Great Neck, N. Y.

NETS AND NETTING

*W. A. Augur, Inc., 35 Fulton St., New York, N. Y.
Brownell & Co., Inc., Moodus, Conn.
R. J. Ederer Co., 540 Orleans St., Chicago, Ill.
The Fish Net & Twine Company, 310-312 Bergen Ave., Jersey City, N. J.
*The Linen Thread Co., Inc., 105 Maplewood Ave., Gloucester, Mass.
Moodus Net & Twine, Moodus, Conn.
New England Fishing Gear Co., 301 Eastern Ave., Chelsea, Mass.
Sargent, Lord & Co., 42 Portland Pier, Portland, Me.
A. M. Starr Net Co., East Hampton, Conn.

OILS

Esso Standard Oil Co., 26 Broadway, New York 4, N. Y.
Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.
*Socony-Vacuum Oil Co., Inc., Marine Sales Dept., 26 Broadway, New York 4, N. Y.

PAINTS

Amercoat Division, P.O. Box 3428, Terminal Annex, Los Angeles 54, Calif.
Hart and Burns Inc., Riverside, Calif.
*International Paint Co., Inc., 21 West St., New York, N. Y.
Pettit Paint Co., Belleville, N. J.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Tarr & Wonson, Ltd., Gloucester, Mass.

PISTON RINGS

Atlantic Engine Supply, Inc., 491 Neponset Ave., Boston 22, Mass.

PRESERVATIVES

"Cuprolignum": Robert S. Chase, 195 Marlborough St., Boston 16, Mass. Megary & Co., 16 E. Lexington St., Baltimore 2, Md.
The Teckkote Co., 821 W. Manchester Ave., Inglewood, Calif.
Unexcelled Chemical Corp., 11 Park Place, New York 7, N. Y.

PROPELLERS

*Columbian Bronze Corp., Freeport, N. Y.
Federal Propellers, Grand Rapids, Mich.
F. Ferguson & Son, 1132 Clinton St., Hoboken, N. J.
*Hyde Windlass Co., Bath, Me.
*Michigan Wheel Co., Grand Rapids, Mich.

PROPELLER SHAFTS

The International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.

PUMPS

The Edson Corp., 49 D St., South Boston, Mass.
Marine Products Co., 515 Lycaste Ave., Detroit 14, Mich.

RADIO DIRECTION FINDERS

*Bludworth Marine, 100 Gold St., New York 7, N. Y.
Fisher Research Laboratory, Inc., Palo Alto, Calif.
Kaar Engineering Co., Palo Alto, Calif.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
Sargent, Lord & Co., 42 Portland Pier, Portland, Me.
Submarine Signal Division, Raytheon Manufacturing Co., 138 River St., Waltham 54, Mass.

RADIO RECEIVERS

National Company, 61 Sherman St., Malden, Mass.

RADIO TELEPHONES

Fisher Research Laboratory, Inc., Palo Alto, Calif.
The Harris Co., Portland, Me.
Hudson American Corp., 25 West 43rd St., New York 18, N. Y.
Jefferson-Travis, Inc., 76 Ninth Ave., New York 11, N. Y.
Kaar Engineering Co., Palo Alto, Calif.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
Sargent, Lord & Co., 42 Portland Pier, Portland, Me.

RANGES

The Maxim Silencer Co., 65 Homestead Ave., Hartford, Conn.
"Shipmate": Stamford Foundry Co., Stamford, Conn.

REVERSE AND REDUCTION GEARS

*Auto Engine Works, Inc., 333 A. North Hamline Ave., St. Paul, Minn.
*Snow-Nabstedt Gear Corp., Welden St., Hamden, Conn.
Twin Disc Clutch Co., 1341 Racine St., Racine, Wis.
*G. Walter Machine Co., 84 Cambridge Ave., Jersey City 7, N. J.

RUBBER BOOTS

Beacon Falls Rubber Footwear, Beacon Falls, Conn.

RUBBER CLOTHING

Beacon Falls Rubber Footwear, Beacon Falls, Conn.
J. F. Carter Co., Beverly, Mass.
Hodgman Rubber Co., Framingham, Mass.
H. M. Sawyer & Son Co., East Cambridge, Mass.

RUST PREVENTIVE

Sudbury Laboratory, Box 780, South Sudbury, Mass.

SEAM COMPOUNDS

Standard Dry Wall Products, Box X, New Eagle, Pa.

SHIPBUILDERS, BOATYARDS

Avondale Marine Ways, Inc., Westwego, La.
Bath Iron Works, Bath, Me.
*Bethlehem Steel Co., Shipbuilding Division, Bethlehem, Pa.
Bristol Yacht Building Co., South Bristol, Maine.
Camden Shipbuilding & Marine Railway Co., Camden, Me.
Delaware Bay Shipbuilding Co., Inc., Leesburg, N. J.
*Diesel Engine Sales Co., Inc., St. Augustine, Fla.
Electric Boat Co., Groton, Conn.
*Liberty Dry Dock, Inc., Foot of Quay St., Brooklyn 22, N. Y.
Luders Marine Construction Co., Stamford, Conn.
Newbert & Wallace, Thomaston, Maine.
*Frank L. Sample, Jr., Inc., Boothbay Harbor, Me.
Southwest Boat Corp., Southwest Harbor, Me.
Webber's Cove Boat Yard, East Blue Hill, Me.

STEERING GEAR

The Edson Corp., 49-51 D St., South Boston, Mass.
Sperry Gyroscope Co., Division of the Sperry Corp., Great Neck, N. Y.

STERN BEARINGS

*"Goodrich Cutless": Lucian Q. Moffitt, Inc., Akron 8, Ohio.
Hathaway Machinery Co., New Bedford, Mass.

TRAWLING EQUIPMENT

Bromfield Mfg. Co., Inc., 246-256 Border St., East Boston 28, Mass
Hathaway Machinery Co., New Bedford, Mass.
New England Trawler Equipment Co., 301 Eastern Ave., Chelsea, Mass.

WHISTLES

*Cunningham Mfg. Co., 4200 West Marginal Way, Seattle 6, Wash.

WIRE ROPE

*Bethlehem Steel Co., Bethlehem, Pa.
*John A. Roebling's Sons Co., Trenton 2, N. J.
*Wickwire Spencer Steel Division, Palmer, Mass.

Lake Erie Productive

(Continued from page 18)

Ontario side, harboring more than 25 commercial fishing boats throughout the year. The best fishing grounds on the Ontario side lie between Point Pelee and Rondeau, and shortly east of Long Point.

Gill Nets Most Common

The most common, and perhaps the most profitable method of commercial fishing in Lake Erie is by use of gill nets.

Commercial fishing laws provide for the use of different sizes of mesh for the various species of lake fish. Nets of larger mesh are utilized for the taking of whitefish, large pike, carp and lake trout, whereas nets of smaller size mesh are used for the smaller species of fish.

The takes from pound nets, which are more popular in the western region of the Lake, are lifted with the windlass from the fishing tug, while a dory or pound net boat is sent alongside to scoop out the fish with a dip net. After the lift is completed and the fish taken, the pound net is reset and the fish tug starts the journey to port, arriving early in the afternoon with its fish cargo.

Commercial ice fishing on Lake Erie commences in January when ice forms on the water and continues throughout February and March. A normal freeze renders the ice 12" to 18" thick. In below zero temperatures the ice often becomes as much as 36" in thickness. Herring, pickerel, sauger and perch make up the bulk of the catches taken by ice fishermen. In the eastern region of the Lake, however, many whitefish are taken through the ice.

Hatchery Operations

Shortly following the Civil War the States and Federal Government constructed fish hatcheries to restock the Lake and its streams. In the 1870's the Ohio State Fish Hatchery was established at Toledo to propagate whitefish and pickerel. Later the hatchery was moved to Sandusky, Ohio.

From 1887-1888 more than 65,000,000 pickerel and 100,000,000 whitefish were hatched and deposited in Lake Erie and its tributaries. Since then billions of fish have been hatched, reared and released in Lake Erie.

From 1918 to 1927 the New York Conservation Department hatched 600,000,000 whitefish, trout, ciscoes, pike perch and smallmouth bass for Lake Erie. The Pennsylvania Conservation Department also has done much to maintain fish resources in Lake Erie.

It is thought that what has saved Lake Erie from the fate of Lake Huron, where lake trout resources have decreased to practically nil, is the continued restocking of hatchery reared whitefish, trout, pickerel, pike and perch.

At present, extensive research work is being conducted by fish scientists from both the United States and Canada to determine why desirable species of fish fail to show up in nets one year and then reappear in a later season. This occurs despite persistent plantings and natural propagation.

Index to Advertisers

W. A. Augur, Inc. 45
Auto Engine Works, Inc. 8

Bendix Aviation Corp., Pacific Div.. 42
Bethlehem Steel Co. (Shipbldg.).... 37
Bethlehem Steel Co. (Wire Rope)... 41
Bludworth Marine 34

Caterpillar Tractor Co. 13
Chris-Craft, Marine Engine Div.... 44
Chrysler Corp., Marine Engine Div. 7
Columbian Bronze Corp. 45
Columbian Rope Co. 1
Cooper-Bessemer Corp. 54
Cummins Engine Co. 30
Cunningham Mfg. Co. 48

Bill DeWitt Div. 49
Diesel Engine Sales Co., Inc. 48

Enterprise Engine & Foundry Co. (Process Machinery Div.) 6
The Enterprise Mfg. Co. 41

Hyde Windlass Co. 34

International Paint Co., Inc. 38

Kelvin & Wilfrid O. White Co. 49

The Lathrop Engine Co. 3
Liberty Dry Dock, Inc. 52
The Linen Thread Co., Inc. 2
Lister-Blackstone, Inc. 41

McClain's Sea Foods 48
Michigan Wheel Co. 37
Lucian Q. Moffitt, Inc. 43

New Bedford Cordage Co. 32
Nordberg Mfg. Co. 14
Northill Co., Inc. 48

F. J. O'Hara Trawling Co. 4
D. W. Onan & Sons, Inc. 49

Packard Motor Car Co. 10
Perkins-Eaton Machinery Co. 35

Red Wing Motor Co. 47
E. S. Ritchie & Sons, Inc. 52
John A. Roebling's Sons Co. 9

Frank L. Sample, Jr., Inc. 49
Snow-Nabstedt Gear Corp. 33
Socony-Vacuum Oil Co., Inc. 53
Surrette Storage Battery Co. 47

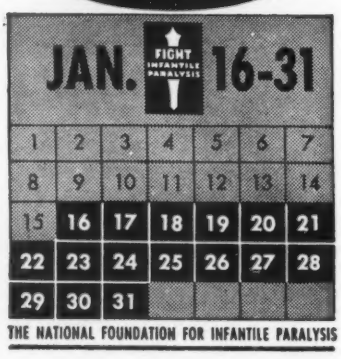
G. Walter Machine Co. 43
Westerbeke Fishing Gear Co. 39
Westinghouse Air Brake Co., Industrial Div. 37
Wickwire Spencer Steel Div. 11

When You Ship FISH, LOBSTERS
or SCALLOPS to the Boston Market
FOR BEST RESULTS SHIP TO
R. S. HAMILTON COMPANY
Established 1895
17 Administration Building Fish Pier, Boston, Mass.

GEERD N. HENDEL
NAVAL ARCHITECT
Designer of Fishing and Commercial Vessels of All Types
Specializing in Aluminum Alloy Hull and Deckhouse Construction
CAMDEN, MAINE TELEPHONE 3097

Commercial Fishing Boats
New Construction and Repairs
Every facility is offered the fishing fleet for repairs of all kinds and construction of new boats,—two floating dry docks, complete machine shop, electric welding. The plant is particularly well equipped for building steel trawlers. We welcome correspondence.
LIBERTY DRY DOCK, INC.
FOOT OF QUAY STREET BROOKLYN, N. Y.

JOIN THE MARCH OF DIMES



THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

Classified Advertising

Rates: $1.00 per line, $5.00 minimum charge. Count 10 words to a line. Closing date, 25th of month preceding date of issue.

MARINE BARGAINS

Item T-AW, 75′ x 17′ x 9.6′ trawler, 54 gross, 37 net tons. Built Kennebunkport, Me. 1938, ices 100,000 lbs. of fish. 180 hp. Wolverine engine, A-1 condition, fuel 2,000 gals. Oak construction. Quick sale, $26,000. Item TEX-H, fish or work boat 41.8′ B. P. x 14.6′ x 4.5′, 15 gross tons, power 40 hp. Lathrop, standard model gas engine, hull thoroughly rebuilt 1937 and 1949. In the best of condition. Full equipment, price $4,000, ready to sail. Item P.PAT, line trawler, built 1948, oak and cedar, 42′ x 13.3′ x 6′, power Gray Diesel, 225 hp., reduction gear. Full equipment, radiotelephone, range finder, etc., all like new, $9,000. These are only a few of our listings. Write us as to your requirements. Tugs, scows, fish and work boats, draggers, etc., gas and Diesel engines, 10 to 500 hp. Knox Marine Exchange, Camden, Me.

ENGINE FOR SALE

Fairbanks-Morse Marine Diesel, 6 cylinder, 180 hp., Model 35 F 8-¾, 4 years old, Kinney clutches fore and aft, extras, $2500.00 F.O.B. Greenport, L. I. Write Philip Reinhardt, Southold, L. I., N. Y.

TANKER FOR SALE

For sale: tanker *Harbor Supply*, length 37.6′, width 9.5′, draft 4.4′. Capacity in cargo tanks approximately 3,000 gallons. This vessel is powered with a 4-cylinder A-Model Superior Diesel engine in good running condition. Can be seen at Portland Pier, Portland, Me. For details and other information write Harbor Supply Oil Co., Inc., 40 Portland Pier, Portland, Me.

TWO FISHING BOATS FOR SALE

Two fishing boats, 87′ long, 21′6″ beam, 320 Fairbanks-Morse Diesel engine, will hold about 130,000 lbs. of fish. These boats are four years old and in excellent condition. Price $125,000 for both boats. Walter C. Benson, 18 Bartlett Parkway, Winthrop, Mass.

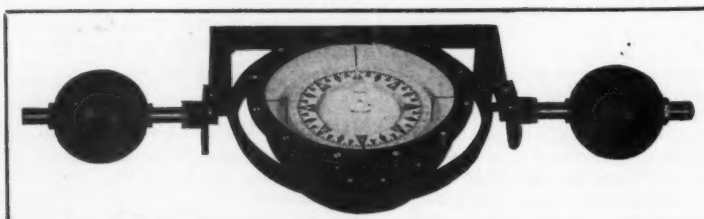
ENGINES FOR SALE

Three used Superior 180 hp., 400 rpm., 6-cylinder, 9 x 12 direct reversing marine engines with sailing clutch, fresh water cooling, front-end drive and 48″ x 34″, 3-blade Columbian propellers. 7-8 years old, in good condition. Now in service in Maine. To be replaced with 250 hp. Superior Diesels. Available end November to January 1. Price $2,500 F.O.B. Portland. National Supply Co., Room 901, One Broadway, New York 4, N. Y.

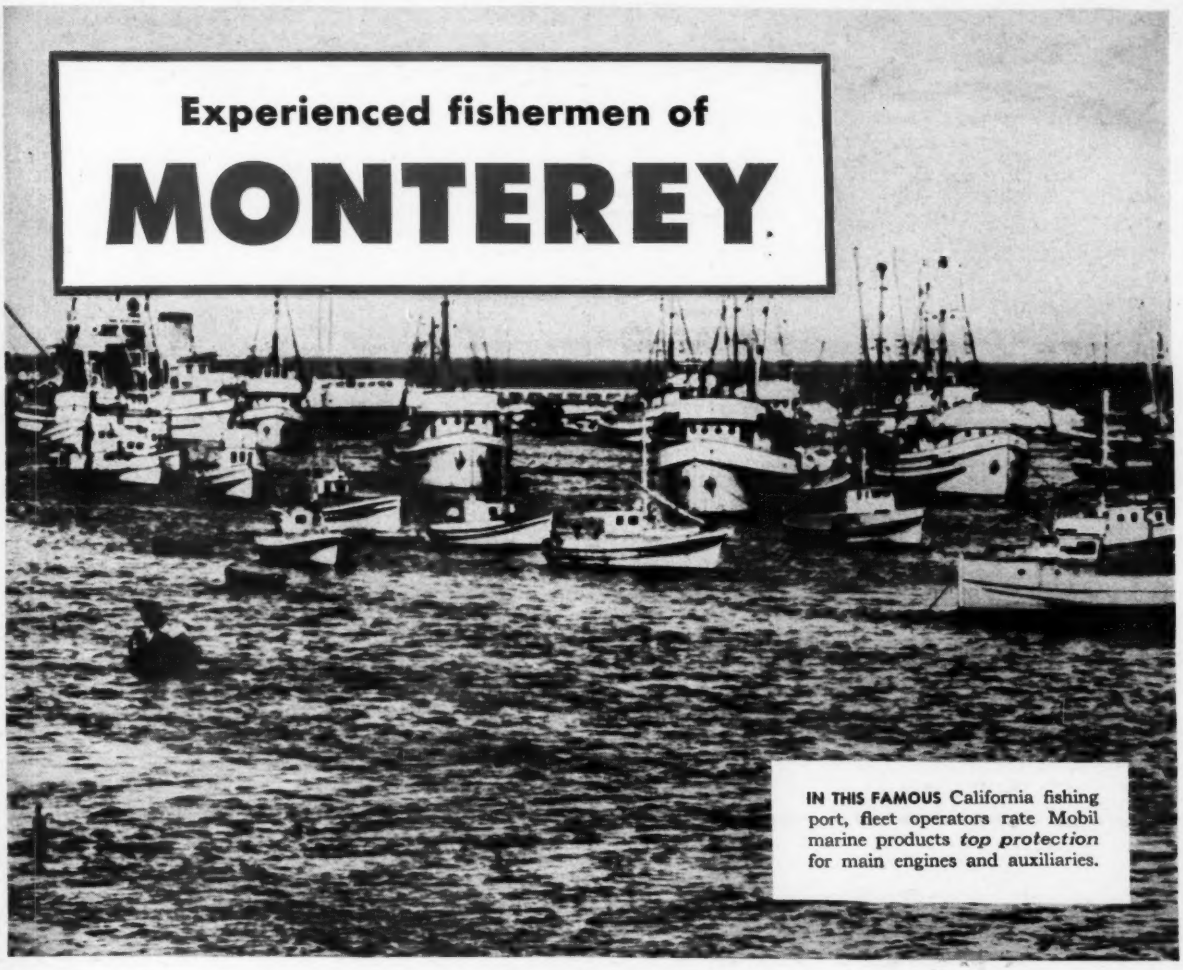
DRAGGER "LINDY" FOR SALE

Dragger *Lindy*, 50′ x 15′ x 6′, D13000 Caterpillar, ship-to-shore radio, 25-watt, 2 sets doors; 6 nets, 2 sets dredges, dory, pilothouse aft. Now scalloping. Price—$15,500. George D. Olson, E. Washington St., Toms River, N. J.

Where to Ship in New York
Beyer Fish Co., Fulton Fish Market
International Fish Co., 111 Fulton Fish Market
Lester & Toner, Inc., Fulton Fish Market
South Fish Co., 31 Fulton Fish Market
Frank W. Wilkisson, Inc., 16 Fulton Market



"Ritchie" Fisherman
7″ Reduced Card Compass In Bracket
An Offshore Compass for Offshore Boats
Proven At Sea
E. S. Ritchie & Sons, Inc.
112 Cypress St. Brookline, Mass.


Experienced fishermen of
MONTEREY
IN THIS FAMOUS California fishing port, fleet operators rate Mobil marine products *top protection* for main engines and auxiliaries.

RELY ON

Mobil Marine Service

MARINE PRODUCTS
SOCONY-VACUUM

LAST SEASON, Monterey's sardine catch alone totaled an impressive 80,852,000 pounds.

To maintain high production like this, experienced Monterey fishermen keep their vessels at top operating efficiency with high-quality Gargoyle Marine Oils—famous Mobil Marine Service.

Make more profit trips with your fleet. Insist on this proved fishing fleet service!

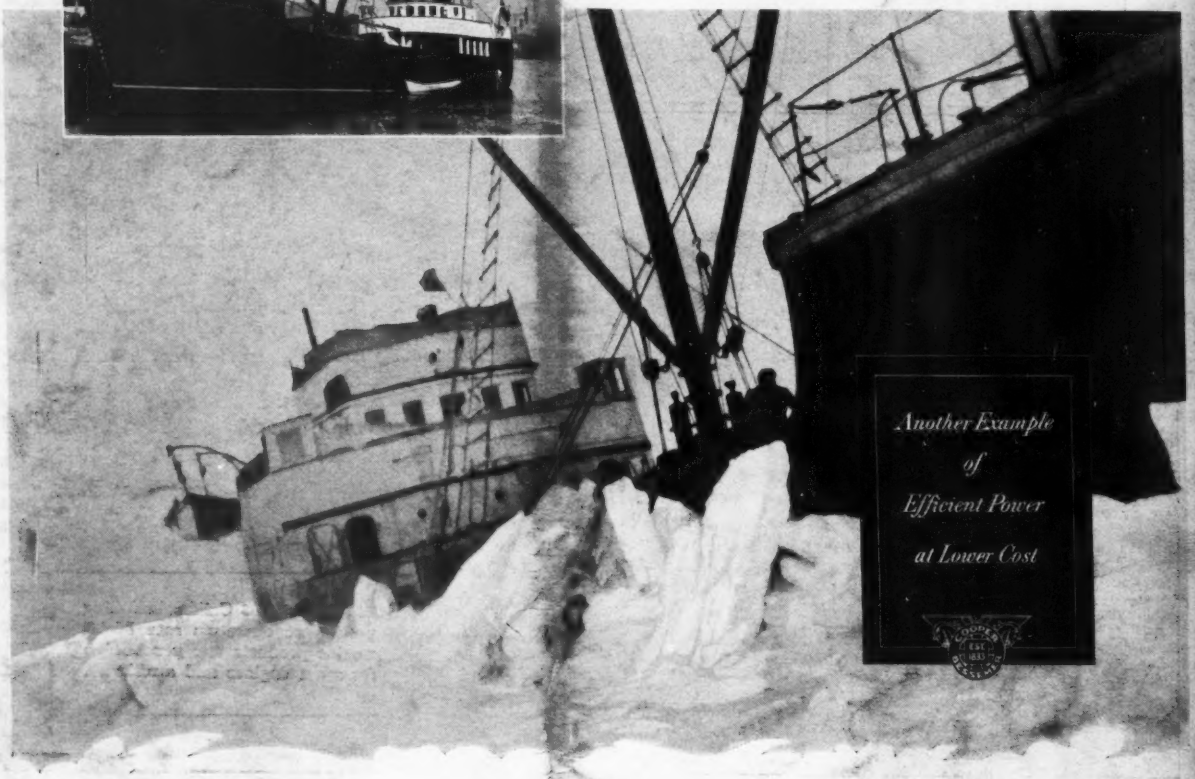
NOW—Get these Proved Lubrication Aids

To keep accurate record of your ship's lubrication service, ask for new "Maintenance" form.

Ask, too, for new Lubrication Chart—gives recommendations for correct lubrication of all shipboard equipment.

SOCONY-VACUUM OIL COMPANY, INC., and Affiliates: MAGNOLIA PETROLEUM COMPANY, GENERAL PETROLEUM CORPORATION

Leading a vigorous dual life, the 140' Terra Nova combines Labrador sealing with freighting between Canadian, Newfoundland, Labrador and West Indies ports. The 379-ton vessel was designed by Captain Jean Berthe, superintendent of Newfoundland Shipyard, Ltd., is owned and operated by Bowring Brothers, Ltd., and is powered by an efficient Cooper-Bessemer JS-6 diesel.



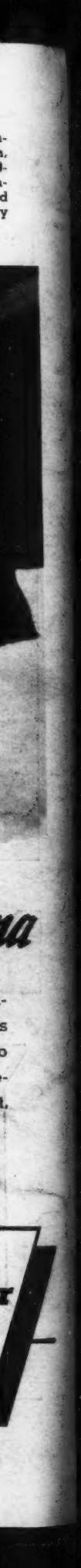
Ask the Terra Nova about *diesel stamina*

HERE'S a picture that speaks louder than words about gruelling service. . . .

During the sealing season, the Terra Nova again and again fights mountains of ice. Her Cooper-Bessemer diesel must withstand continuously heavy, unavoidable overloads, must also take her to and from the Labrador ice fields fast! Delay might make all the difference between profit and loss for the season.

Despite such punishing service, the Terra Nova's diesel has a perfect 2-year record. To say that her captain and engineers are enthusiastic about Cooper-Bessemer performance is putting it mildly. It counts with these men to have the prolonged security, the full-power response in their engine room that only the finest, best-designed engines can give.

The
Cooper-Bessemer
Corporation

MOUNT VERNON, OHIO — GROVE CITY, PENNA.

New York, N. Y. Washington, D. C. San Francisco, Calif. Seattle, Wash.
Houston, Texas St. Louis, Mo. Chicago, Ill. Los Angeles, Calif.
Gloucester, Mass. Calmes Engineering Co., New Orleans Caracas, Venezuela
Maxwell-Simpson & Associates, Vancouver, B. C.